

EXHIBIT 8

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF TENNESSEE
Nashville Division

L.W., by and through her parents and next
friends, Samantha Williams and Brian
Williams, et al.

Plaintiffs,

v.

Civil No. 3:23-cv-00376

JONATHAN SKRMETTI, in his official
capacity as the Tennessee Attorney General
and Reporter, et al.,

Defendants.

**EXPERT DECLARATION OF
GEETA NANGIA, M.D.**

TABLE OF CONTENTS

Background and Qualifications.....	1
Gender Dysphoria	5
I. Diagnostic Criteria	5
II. Prevalence	8
III. Treatments.....	18
IV. Medical Interventions and Associated Risks	20
V. Clinical Experience with Gender Dysphoria	22
VI. The Role of Exploratory Therapy for Gender Dysphoria in My Practice	28
Informed Consent.....	29
I. Medical Ethical Standards.....	30
II. Informed Consent as an Ethical Standard in Minors	32
A. Decision-Making Capacity	32
B. Full Disclosure	46
C. Comprehension	47
III. Parental Consent with Child Assent When Minor Consent is Unattainable	48
Gender Dysphoria and Informed Consent in Minors	49
I. Minor Gender Dysphoria Prevalence and Informed Consent.....	51
II. Minor Treatment Recommendations and Informed Consent	56
Trauma and Gender Dysphoria.....	64
Conclusions	77
I. Informed Consent is Not Attainable for Medical or Surgical Transition in Minors.....	80
II. A Better and More Compassionate Approach is Provision of Therapy Until Adulthood When Consent Can be Provided	85
III. Tennessee Senate Bill I Appropriately Protects Minors	87
Works Cited	89

Appendix A. Triadic Model of Neurobiology	98
Appendix B. Adolescent fMRI Studies when Presented with Reward	99
Appendix C. Cross Talk between PFC and Ventral Striatum	100
Appendix D. Erikson's Psychosocial Development Model	101

I, Geeta Nangia, MD, have been retained by counsel for the Defendants in connection with the above captioned litigation.

1. I have been asked by counsel for the Defendants to provide my expert opinion on the diagnosis and treatment of gender dysphoria in minors as it relates to Tennessee Senate Bill I.
2. I am over the age of 18. I have actual knowledge of the matters stated herein. If called to testify in this matter, I would testify truthfully and based on my expert opinion. I am being compensated at an hourly rate of \$350.00 per hour for documentation and \$550.00 per hour of testimony that I devote to this case. My compensation does not depend on the outcome of this litigation, the opinions that I express, or the testimony that I provide.

BACKGROUND AND QUALIFICATIONS

3. I am a Board-Certified Child and Adolescent Psychiatrist, and Board-Certified Adult Psychiatrist. I obtained my B.A. in Biochemistry and Molecular Biology from Boston University and my M.D. from Boston University School of Medicine. I graduated with the Ruth Hunter Johnson Prize in Psychiatry. My residency and fellowship training, in Psychiatry and Child and Adolescent Psychiatry, respectively, were at The Medical University of South Carolina (MUSC). I completed my fellowship in 2007.
4. I have been active in teaching medical students and residents throughout my

career and received the Circle of Excellence in Teaching at MUSC. In recent years, my clinical lectures have focused on child and adolescent development.

5. I have worked in the field of Child and Adolescent Psychiatry as a community psychiatrist in a wide range of settings, providing comprehensive psychiatric services for children and families. I chose to work as a community psychiatrist because I desired to evaluate and treat a wide range of mental health disorders and wanted to see young people in the context of their families and community “systems” (e.g., schools, extracurriculars, local supports). Throughout my career I have worked in rural, urban, and suburban areas, and in outpatient, inpatient, partial, as well as residential care settings. I have been very active in school consultations and advocating on a community level for mental health accommodations for youths in school. I have worked toward providing access to mental health care for youths who are underfunded and lack services due to barriers of access and cost. I have provided psychiatric evaluations, psychotherapy, and medication management for children and adolescents, as well as family therapy. I have been a part of multiple interdisciplinary teams.
6. Much of my career has been spent educating, equipping, and supporting families of children who struggle with depression, anxiety, and other mental health issues by stressing the importance of attachment between parents and

children. I believe that an attachment-centered approach to therapy helps children to find their homes as a safe place to connect, where they feel nurtured, supported, and loved. It is connection and secure attachment to safe caregivers that form the foundation for healthy childhood development, allowing a child to successfully progress through the developmental trajectory toward identity consolidation.

7. I continue to provide community mental health care through my private practice and am providing this opinion as a child psychiatrist working in private practice.
8. Over the course of my career, seeing a broad range of psychiatric disorders, I have treated many patients with active gender dysphoria or a history of gender dysphoria. Per my best reflection, I'd estimate that 550 of these have been minors. As discussed below, the modalities of care that I have utilized with minor patients who have gender dysphoria include supportive and exploratory (psychodynamic) therapy, family therapy, and psychopharmacology. The latter has only been used if children and adolescents are also struggling with mental health disorders such as depression or anxiety. I have collaborated with others in the community to garner a network of support for my patients, when deemed appropriate.
9. Given the nature of being a community child psychiatrist, I have the benefit

of being involved with children's health care not only in my office, but also with their families, schools, and outside support systems. This provides me with the ability to have a more complete perspective on their development, and the interventions that produce the best outcomes for their overall wellbeing.

10. My medical opinion below is based upon my training and clinical experience as a Child and Adolescent Psychiatrist, my knowledge of child development, and review of the literature (including standards) on this subject. I may wish to supplement my opinions or the bases for them as new research is published or in response to statements made in my area of expertise.
11. My previous expert witness testimony has been regarding abuse and trauma, and interventions for children struggling with mental health disorders. I also submitted a written report in *Dekker v. Marsteller*, No. 4:22-cv-325-RH-MAF (N.D. Fla.) and *Boe v. Marshall*, No. 2:22-cv-0184 (M.D. Ala.).
12. For medicolegal purposes, I have also, throughout my career in mental health, served as a designated examiner for persons during inpatient hospitalizations, and as part of this process, I have performed numerous capacity assessments and presented them to courts.

GENDER DYSPHORIA

I. Diagnostic Criteria

13. Gender dysphoria in adolescents is defined by the DSM-5-TR as: A marked incongruence between one's experienced/expressed gender and assigned gender, of at least six months duration, as manifested by at least two or more of the following:

- A marked incongruence between one's experienced/expressed gender and primary and/or secondary sex characteristics (or in young adolescents, the anticipated secondary sex characteristics)
- A strong desire to be rid of one's primary and/or secondary sex characteristics because of a marked incongruence with one's experienced/expressed gender (or in young adolescents, a desire to prevent the development of the anticipated secondary sex characteristics)
- A strong desire for the primary and/or secondary sex characteristics of the other gender
- A strong desire to be of the other gender (or some alternative gender different from one's assigned gender)
- A strong desire to be treated as the other gender (or some alternative gender different from one's assigned gender)

- A strong conviction that one has the typical feelings and reactions of the other gender (or some alternative gender different from one's assigned gender)

The condition is associated with clinically significant distress or impairment in social, occupational, and other important areas of functioning. (DSM-5, TR)

14. According to the American Psychiatric Association, gender dysphoria often begins in childhood, but some individuals may not experience it until puberty or much later. (DSM-5-TR)
15. The DSM-5-TR defines gender dysphoria in children as a marked incongruence between one's experienced/expressed gender and assigned gender, lasting at least six months, as manifested by at least six of the following (one of which must be the first criterion):
 - A strong desire to be of the other gender or an insistence that one is the other gender (or some alternative gender different from one's assigned gender)
 - In boys (assigned gender), a strong preference for cross dressing or simulating female attire; or in girls (assigned gender), a strong preference for wearing only typical masculine clothing and a strong resistance to the wearing of typical feminine clothing.

- A strong preference for cross gender roles in make-believe play or fantasy play
- A strong preference for the toys, games, or activities stereotypically used or engaged in by the other gender
- A strong preference for playmates of the other gender
- In boys (assigned gender), a strong rejection of typically masculine toys, games, and activities, and a strong avoidance of rough-and-tumble play; or in girls (assigned gender), a strong rejection of typically feminine toys, games, and activities
- A strong dislike of one's sexual anatomy
- A strong desire for the physical sex characteristics that match one's experienced gender

As with adolescents and adults, the condition must also be associated with clinically significant distress or impairment in social, occupational, or other important areas of functioning. (DSM-5-TR)

II. Prevalence

16. According to a 2022 study done by The UCLA School of Law Williams Institute, entitled “How Many Adults and Youth Identify as Transgender in the United States?” over 1.6 million adults and youth (13-17) identify as transgender in the U.S. Among youth ages 13-17, 1.4 percent identify as

transgender. The data used was from the CDC's BRFSS and YBRS (Behavioral Risk Factor Surveillance System and the Youth Risk Behavior Survey). The BRFSS questionnaire asks, “Do you consider yourself to be transgender?” (Herman 2022)

17. Research shows that transgender individuals are younger on average than the U.S. population, and youth ages 13-17 are significantly more likely to identify as transgender than adults ages 65 and older. (Herman 2022)
18. At the state level, estimates from this same study show that 3.0% of youth ages 13-17 are identifying as transgender in New York as compared to 0.6% in Wyoming. (Herman 2022)
19. Per a 2022 report from Herman et al. and The Williams Institute, when comparing the current report with estimates made by The Williams Institute in 2016-2017, researchers found that the percentage and number of adults who identify as transgender has remained steady over time. The YRBS data shows that youth comprise a larger share of the transgender identified population than what was previously estimated, currently comprising 18.3% of the transgender identified population in the United States, up from 10 percent previously. (Herman 2022)
20. There are several contributing factors to the rise of gender dysphoria that I observe in my own patient population: 1) an increase in “pathologizing” of

what I view — and what much of the reliable scientific literature has long viewed — as a normal part of childhood development, 2) shifts in cultural norms having to do with gender exploration in adolescence, 3) the advent of social media, 4) heightened vulnerability in youth, and 5) what some call “social contagion.” These are explained below.

21. Increase in pathologization of a normal part of childhood development: When gathering a developmental history, it has been my experience that many parents and children describe a period of time, greater than six months, during which the child was a “tomboy” or “tomgirl” (per their own terminology). When discussing this further, most of these parents and children openly talk about how the child felt strongly that he/she wanted to be the opposite gender, preferred to play with stereotypical opposite gender toys, preferred to engage in opposite gender activities, wanted to only wear opposite gender clothing, preferred opposite gender playmates, rejected same gender toys/activities, and had significant associated distress. These are the first six out of eight criteria in the gender dysphoria diagnosis, and only six criteria and significant distress are necessary for the diagnosis. However, these children weren’t ever diagnosed formally, their parents didn’t label or pathologize their behavior, and the symptoms eventually passed and the children became comfortable with their natal sex.

22. In colloquial English, in decades past, society referred to children who had such symptoms as “tomboys” and “tomgirls.” Gender-medicine experts today distinguish between tomboys or tomgirls and children with gender dysphoria. They state that the former display an outward expression of the opposite gender to the world, but feel an internal comfort with their birth gender. The latter, they say, have an internal psychological sense that they are of another gender. (DSM-5-TR)
23. The American Academy of Child and Adolescent Psychiatry uses the terms gender nonconformity versus gender discordance to make this same distinction. However, they acknowledge in their Practice Parameters that “there may be clinical difficulty distinguishing between gender nonconformity and gender discordance.” (Adelson 2012)
24. In my clinical experience, I have had difficulty appreciating this distinction. First, this is because both parents and children, who describe such a period in the child’s life of having been a “tomboy” or “tomgirl,” most often retrospectively endorse the criteria that are necessary for the gender dysphoria diagnosis. Second, this assertion — that children with gender dysphoria have an “internal psychological sense” of their gender incongruence — implies that children are able to have consolidated identity. This is not congruent with what we know about identity formation and consolidation, a stage which

doesn't occur until adolescence. While gender identity is in the process of forming in very early childhood, this formation continues to be influenced by multiple factors over many years, as the normal course of childhood development unfolds. It isn't until adolescence that several key psychosexual and psychosocial development models show identity forming and becoming more fixed. In other words, children's sense of who they are, or their "identity," can and often does shift over time as part of normal development. It is not until they reach the end of adolescence, at the cusp of adulthood, when identity is said to consolidate. (Erikson 1998)

25. Still, this notion that children have an internal sense of gender and should be offered specialized care if they endorse the above criteria has led to the unnecessary pathologization of what otherwise has been considered a normal phase of development. This mistaken notion has contributed to an increase in gender dysphoria diagnoses. Many parents, who in the past simply would have not worried about their children who had the above "symptoms," are now compelled to consider a diagnosis of gender dysphoria and treat the child because of the fear that their child may suffer if they don't. Physicians, likewise, are acting quickly to usher these children into gender-affirming care, out of the same fear. This is in spite of the data showing that "cross-gender wishes usually fade over time and do not persist into adulthood." (Adelson

2012)

26. Shifts in cultural norms in adolescence and the advent of social media:

Culturally, society has created a new “norm” of gender questioning and exploration in adolescence. This cultural norm of gender exploration also has been reinforced by the medical community. According to a recent *New York Times* article, “It’s developmentally appropriate for teenagers to explore all facets of their identity — that is what teenagers do,” stated Dr. Angela Goepferd, medical director of the Gender Health Program at Children’s Minnesota Hospital. “And, generationally, gender has become a part of someone’s identity that is more socially acceptable to explore.” (Ghorayshi 2022)

27. Hence, not only have cultural norms shifted due to information availability

and social media, but they have also shifted due to physicians informing parents and children that gender exploration is healthy and appropriate. One can infer that if a child has never questioned their own gender previously, this new norm tells them that it is healthy to do so and encourages it as part of normal development.

28. Further, the advent and expansion of social media has created waves in what

youth consider to be popular, acceptable, and normative. Youths are consuming more social media than ever before. Social media enables the

spread of information pertaining to many issues, including those related to sexual development, sexual orientation, sexual activity and practices, and gender. There has been a dramatic increase in the global public discourse surrounding LGBTQA issues amongst youths. There has been widespread content circulating throughout society on gender exploration, incongruence, and dysphoria. This is generally accompanied by passionate advocacy that is highly regarded by youths of all ages. Celebrities have highlighted LGBTQA issues and have used various forms of social media, like TikTok, to promote and celebrate gender incongruence. On a local level, information sharing has led to the popularity of LGBTQA clubs at schools, community groups dedicated to raising awareness and acceptance, and enthusiastic support networks for those who identify as LGBTQA. Many of these can easily be found online. With the spread of online information and cultural advocacy, the natural heightened propensity of youth to explore gender and see it as fluid has increased.

29. In a 2018 study on parent surveys of children with gender dysphoria, Littman writes: “Parents identified the sources they thought were most influential for their child becoming gender dysphoric. The most frequently answered influences were: YouTube transition videos (63.6%); Tumblr (61.7%); a group of friends they know in person (44.5%); a community/group of people

that they met online (42.9%); a person they know in-person (not online) 41.7%.” (Littman 2018)

30. Youths are more vulnerable to novel information streams. According to another article in *The New York Times*,

Helana Darwin, a sociologist at the State University of New York at Stony Brook who began researching nonbinary identities in 2014, found that the social-media community played an unparalleled role in people’s lives, especially those who were geographically isolated from other nonbinary people. . . . Her research found that social media is a gathering place for discussing the logistics of gender — providing advice, reassurance and emotional support, as well as soliciting feedback about everything from voice modulation to hairstyles. . . . Psychologists often posit that as children, we operate almost like scientists, experimenting and gathering information to make sense of our surroundings. Children use their available resources — generally limited to their immediate environment — to gather cues, including information about gender roles, to create a sense of self.

(Wortham 2018)

31. In this same *New York Times* article, author Jenna Wortham asked Alison Gopnik, a renowned philosopher and child psychologist, “if it’s possible that social media can function as a foreign country, where millions of new ideas and identities and habitats are on display — and whether that exposure can pry our calcified minds open in unexpected ways.” Gopnik replied, “Absolutely. . . . Having a wider range of possibilities to look at gives people a sense of a wider range of possibilities, and those different experiences might

lead to having different identities.” Wortham continued:

When we dive into Instagram or Facebook, we are on exploratory missions, processing large volumes of information that help us shape our understanding of ourselves and one another. And this is a country that a majority of young adults are visiting on a regular basis. A Pew study from this year found that some 88 percent of 18-to-29-year-olds report using some form of social media, and 71 percent of Americans between ages 18 and 24 use Instagram. Social media is perhaps the most influential form of media they now have. They turn to it for the profound and the mundane — to shape their views and their aesthetics. Social media is a testing ground for expression, the locus of experimentation and exploration.

(Wortham 2018)

32. So, it would seem most plausible that the normalization and even encouragement of gender exploration in adolescence combined with the emphasis on building awareness of gender dysphoria, particularly through social media, would lead to a heightened prevalence of the gender dysphoria diagnosis. More adolescents naturally are exploring gender, more have awareness of gender fluidity and gender dysphoria, and more are seeking out help or guidance.
33. For example, an adolescent natal female who has been bullied by female peers for years now has shifted to having mainly male friends, preferring male athletic clothing, and wanting a short haircut to fit in with them. She believes her emotions to be more in line with theirs and feels distress over this. Later, through exposure to transgender friends and information she finds online, she

comes to believe that she has gender dysphoria and needs gender-affirming care, so she seeks help. Previously she may have viewed her feelings of distress and her behaviors to be a mere reflection of her vulnerability around females based on her negative experiences. In years past, such an adolescent natal female may not have interpreted that her feelings and negative experiences or the reactions of others had anything to do with a condition like gender dysphoria. But now, surrounded by widespread societal, cultural, and peer encouragement, she may contextualize those feelings and discomfort in ways that prompt her to inquire, first, into gender dysphoria as a concept, and then into riskier or more invasive and biologically systemic responses to her internal discomfort. Situations like this are common, in my experience, and I believe they have led to an increase in the diagnosis of gender dysphoria.

34. Heightened vulnerability: Youth today are also experiencing more vulnerability and a feeling of being disconnected, or not belonging. A new U.S. Department of Health and Human Services (HHS) study published in the American Medical Association's journal, *JAMA Pediatrics*, reports significant increases in the number of children diagnosed with mental health conditions. The study, conducted by the Health Resources and Services Administration (HRSA), finds that between 2016 and 2020, the number of children ages 3-17 years diagnosed with anxiety grew by 28.9% and those

with depression by 26.7%. (Lebrun-Harris 2022)

35. Certainly, there has been a large increase in mental health disorders in the United States over the last several years, with COVID increasing the numbers of vulnerable children. Families have been struggling, and there has been an increased rate of family disruption. Stress and trauma have exponentially increased, and all these stressors impact youth vulnerability, and youth seeking out places where they fit and belong. In my experience with adolescents, many are drawn to LGBTQ clubs and online groups, and find them to be a kind respite where they are cared for, affirmed, and feel a sense of comradery with other peers who've faced social vulnerability and had a feeling of not belonging. Feeling embraced and accepted by friends whom they can relate to may lead them to consider that they, too, may be transgender. In my adolescent patients, this type of feeling is echoed often and lends to them endorsing gender-dysphoria criteria.
36. Social Contagion: Lastly, heightened prevalence of gender dysphoria may be attributed to a “bandwagon effect” or, as others call it, “contagion.” In my experience, adolescents presenting with gender dysphoria have often described being influenced by peers and social media to consider that they may be the opposite gender. Similar types of influence have been reported in the past with other mental health conditions in psychiatry. For example, a

study showed self-harming behaviors were socially contagious in adolescents, and studies on eating disorders have shown similar patterns. (Riggio 2022; Dishion 2011)

III. Treatments

37. According to the American Academy of Child and Adolescent Psychiatry, principles that are important in the treatment of youth with gender discordance are as follows:

1) A comprehensive diagnostic evaluation should include an age-appropriate assessment of psychosexual development

for all youths

2) The need for confidentiality in the clinical alliance is a special

consideration in the assessment of sexual and gender

minority youth.

3) Family dynamics pertinent to sexual orientation, gender

nonconformity, and gender identity should be explored in

the context of the cultural values of the youth, family, and

community.

4) Clinicians should inquire about circumstances commonly

encountered by youth with sexual and gender minority

status that confer increased psychiatric risk.

5) Clinicians should aim to foster healthy psychosexual development in sexual and gender minority youth and to protect the individual's full capacity for integrated identity formation and adaptive functioning.

6) Clinicians should be aware of current evidence on the natural course of gender discordance and associated psychopathology in children and adolescents in choosing the treatment goals and modality.

7) Clinicians should be prepared to consult and act as a liaison with schools, community agencies, and other health care providers, advocating for the unique needs of sexual and gender minority youth and their families.

8) Mental health professionals should be aware of community and professional resources relevant to sexual and gender minority youth.

(Adelson 2012) The parameters also note, with regard to medical or surgical transition: “In general, it is desirable to help adolescents who may be experiencing gender distress and dysphoria to defer sex reassignment until adulthood, or at least until the wish to change sex is unequivocal, consistent, and made with appropriate consent.” They go on to describe

different treatment approaches when waiting until adulthood is not “feasible.” One approach described is puberty suppression at age 12 followed by cross-sex hormones at age 16, and then gender reassignment surgeries at age 18. Another approach is waiting until Tanner Stage 2 to initiate pubertal suppression, and then proceeding with options for cross-sex hormones and gender reassignment surgeries. A therapeutic group approach with families to help them offer support is described. While the authors report negative outcomes with conversion therapies, they repeatedly comment on the lack of controlled trials looking at other therapeutic (including psychodynamic therapy) approaches in children with gender discordance. (Adelson 2012)

IV. Medical Interventions and Associated Risks

38. Medical gender transition involves puberty blockers and subsequently cross-sex hormones. These interventions are frequently followed by surgeries that can include but not limited to breast augmentation, orchiectomy, vaginoplasty, hysterectomy, phalloplasty, metoidioplasty, and facial surgery.
39. Puberty blockers (gonadotropic releasing hormone agonists or GnRHa) are a form of medication that block the physiological production of sex hormones and are given during the Tanner Stage 2 of development when puberty has just started. (Delemarre-van de Waal 2006)

40. Testosterone (in males) and estrogen (in females) are responsible for changes that occur in puberty. Puberty blockers stop the production of follicle-stimulating hormone (FSH) and luteinizing hormone (LH) from the pituitary, and this then prevents the production of sex hormones.
41. None of the puberty blockers are currently FDA-approved for use in gender dysphoria.
42. In gender dysphoria, puberty blockers are given “off-label” to postpone the changes that occur with puberty. The clinical reasoning behind this is that proponents say that it gives youth time to decide whether to “fully” transition, through a trajectory of cross-sex hormones and then surgeries, while preventing changes that may cause distress. (Delemarre-van de Waal 2006)
43. There is marked debate on the safety of puberty blockers, cross-sex hormones, and surgeries utilized in gender transition.
44. Some of the risks that are debated in the literature are the long-term effects of these medications on the endocrine system, reproductive system, bone growth, brain maturation, psychological functioning, and metabolic functioning.
45. I am generally familiar with the literature surrounding these debates. I have reviewed the report of Dr. James Cantor submitted in this case and agree with his conclusion that the existing studies of puberty-blockers and cross-sex

hormones in minors provide no reliable evidence of effectiveness for improving mental health relative to mental health treatments that lack medical risk. I also agree with his conclusion that all existing systematic reviews of safety and effectiveness of these treatments have concluded that the evidence on medicalized transition in minors is of poor quality.

V. Clinical Experience with Gender Dysphoria

46. As part of an initial evaluation, I ask individuals how they identify in terms of sexual orientation and gender. When taking a developmental history during an in-person assessment, I ask about an individual's social development, as well as questions pertaining to self-concept (how one views oneself). As part of this, I may delve into questions that deal with gender, in an age-appropriate manner, with the child, adolescent, and/or parent. Questions that I ask pertaining to gender identity include, but are not limited to:

- 1) How did you feel about your gender early on in your life?
- 2) Did you feel comfortable with your gender?
- 3) If not, did you identify with another gender?
- 4) How did this affect you, and the way that you saw yourself?
- 5) What types of play did you enjoy the most?
- 6) Were most of your friends of the same gender or opposite gender?
- 7) Do you remember feeling discomfort with your body in any fashion?

- 8) Did you prefer to ever dress as another gender?
- 9) If you previously felt more comfortable as another gender, or unsure of identifying with your birth sex, how long did this persist?
- 10) If you now feel comfortable with your natal sex, but previously did not, what led to you feeling comfortable?

47. The reason such questions are important in addressing self-concept — and gender as a part of self-concept — is that, developmentally, an individual's early experiences and view of oneself in the context of a greater environment are important to understanding the individual's presenting clinical issues.

48. Since becoming a physician in 2002, I estimate that I've evaluated and treated 550 children and adolescents (and hundreds of adults) who have met criteria at some point in their lives for a "gender dysphoria" diagnosis. Of 550 adolescent patients, I approximate that 350 of these patients had a history of gender dysphoria, as discovered on evaluation or over the course of patient care. This was ascertained via parent or child retrospective report wherein they had met criteria for the diagnosis. For these children, the gender dysphoria resolved with age maturation alone prior to seeing me. Many of these children were referred to by their parents as having been a "tomboy" or "tomgirl," and their parents were not concerned. I discuss these terms above. I did not label or pathologize these children during the course of their mental

health treatment as having had “gender dysphoria,” despite the diagnostic criteria seeming to have been met. But for the purpose of this declaration, I am including them in the discussion of patients I have treated who have had gender dysphoria.

49. I estimate that I’ve seen close to 100 additional child patients who meet criteria for gender dysphoria on clinical interview during or over the course of treatment with me (as opposed to retrospective report). I have often observed that children’s feelings regarding their own gender are a reflection of their perception of gender roles within their family unit and sphere of influence. I have had many female child patients who enjoy climbing trees and playing “boy sports,” playing with “boy toys,” who have a strong desire to be boys like their brothers, play with only boys on the playground, reject “girly” toys and activities, and want to use the restroom standing up like boys do. These children often are emotional and experience some real distress for significant periods about having been born as girls and wanting to be boys in every imaginable way. I’ve had male child patients who do the opposite. With all these children, I have told their parents not to become anxious, and not to pathologize or characterize their child based on their observations.
50. In every case that I have observed, children grow out of such “gender dysphoria” and become comfortable with their natal sex. In fact, these

children are naturally some of the most confident children I've seen over time. I have always attributed this to their parents being comfortable allowing them to explore and engage in free play without feeling any anxious desire to push them toward the toys and activities that are stereotypical of only one gender. They have not pathologized or seen their child's preferences for play and fun as something to be concerned about. Hence, their children learn confidence to explore the world around them, feel validated and affirmed by their parents, without any assumptions that their exploration is anything more than a normal part of growing up.

51. My experience has been that periods of gender incongruence and associated distress are normative and transient, with resolution as the child matures. I have provided these parents and children with guidance; support; and, when needed, exploratory therapy.
52. I also estimate that I have seen just over 100 adolescents who have presented with gender dysphoria that has been more abrupt in onset. The majority of these are biological females, and these cases have grown increasingly frequent over recent years.
53. In these cases, adolescents and/or their parents reported at least one of the following issues as also being primary within their life "systems" (e.g., school, family, peer group, community): 1) a feeling of not fitting in with peers, or

feeling “different” and not belonging, 2) an experience of gender roles within their own families, or within their peer groups, that has had a marked influence on their own perception of gender and gender identity, 3) a history of trauma, 4) a history of disruption of primary attachment, 5) a history of feeling vulnerable and emotionally unsafe, 6) a history of depression, anxiety, or social anxiety, 7) a history of an autism spectrum disorder, 8) an exposure to information on gender via social media, TV, or the internet, with a subsequent curiosity about gender exploration, 9) a feeling of vulnerability, followed by a search for belonging, or 10) a feeling of a good “fit” among peers who have also felt vulnerable in an LGBTQA group online or in school.

54. Almost all of the adolescent patients had taken steps to access additional information about their gender dysphoria from readily available online sources and social media, and many found friendship within LGBTQA clubs at school or online friends in the LGBTQA community. They described feeling accepted, supported, and affirmed within these social groups. Some did not identify as the opposite gender, but rather stated they were “gender queer” or “non-binary.”
55. For all of these youth, I provided exploratory therapy, supportive therapy, and family therapy, or I worked with a therapist who collaborated with me in treatment, to address these factors within the adolescent’s life systems. I also

provided medication management where needed for other mental health issues. Their treatment plans included crafting an individualized approach from the above therapies, harnessing community support, and providing guidance to parents in two key areas: 1) How to best be “present” and establish an emotionally safe environment at home, and 2) how to grow in connection and relationship with their child by loving them for who they are. Among these adolescents, the vast majority realigned with their natal sex over the period of treatment. Some stated, over time, that they were questioning their sexual orientation, and not their gender. All responded to these interventions positively such that, over time, regardless of whether they’d realigned with their natal sex or had a future plan to transition, they no longer experienced gender dysphoria and their mental health improved. Those who had continued gender incongruence felt that they wanted to see how they felt over time rather than pursuing options to medically transition as minors. They were appreciative of the support and therapy and found it helpful.

56. I've treated approximately 25 children/adolescents during their social and/or medical transition. I supported them where they were at on their journey, through psychotherapy and medication management, and I respected their decision based on what treatment options had been afforded to them by other doctors. To clarify, I have never personally referred a minor for medical

transition, as I don't believe the option should be given to minors based on reasons I explain below.

VI. The Role of Exploratory Therapy for Gender Dysphoria in My Practice

57. Minor patients with gender dysphoria benefit tremendously from therapy that explores their feelings and experiences within their "life systems," past and present. I have found that adolescents with gender dysphoria are generally very open to this. They voice that they feel supported and that they gain clarity in the process. Through therapy, just like most youth with presentations other than gender dysphoria, these patients improve in self-concept and mindfulness, becoming aware of how their experiences have affected them, and what defenses they employ when feeling challenged or stressed. They learn to identify their own values and what matters to them, which makes their choices and decisions clearer.
58. The primary modality of therapy that I have utilized in treating gender dysphoria is psychodynamic therapy, I have also utilized cognitive behavioral therapy, interpersonal therapy, and family therapy. I *do not* endorse conversion therapy and I believe it is detrimental. I have treated one adolescent who underwent conversion therapy as part of a religious school prior to seeing me, and she suffered significant trauma as a result. This patient required specific therapy to help her process that trauma.

59. Psychodynamic therapy engages individuals in “free association.” Free association is the idea that whatever is on a patient’s mind guides the clinical session. The free association, or whatever the patient brings up, is deemed of importance and is used to spur exploration of the patient’s past and how that past may be affecting the patient’s present circumstances and feelings.
60. In this context, then, the therapist can help the patient identify how repressed feelings from the past may be influencing the patient’s current decision making, relationships, and behaviors. Over time, this leads to natural “uncovering” of coping and defense mechanisms, fears, desires, and values that are rooted in a person’s past experiences.

INFORMED CONSENT

61. To provide children the best-quality care, physicians should abide by the ethical standards that are universal to the practice of medicine. One of these standards is informed consent. Implicit to the informed consent process are related standards of medical ethics that are central to the practice of medicine, taught in medical school, and widely accepted.

I. Medical Ethical Standards

62. These universal ethical standards include beneficence, non-maleficence, autonomy, truth-telling, confidentiality, and justice.
63. Beneficence is the obligation of the physician to act for the benefit of the

patient. In principle, the physician should support moral rules to protect and defend the rights of others, prevent harm, remove conditions which cause harm, help persons with disabilities, and rescue persons in danger. This means not simply avoiding harm, but actively seeking to promote the welfare of the patient. Beneficence is applied most often during clinical assessment, but also throughout treatment (Varkey 2020).

64. Non-maleficence is the obligation of the physician to not harm the patient. This is supported by moral rules (e.g., do not cause pain or suffering, do not kill, do not cause offense, or deprive others of the goods of life). Hence, the doctor must weigh the benefits of interventions with risks or burdens they may place on the patient. Nonmaleficence and beneficence are both part of the quality-of-life discussion between a doctor and patient. (Varkey 2020)
65. Autonomy is the supposition that all persons have intrinsic and unconditional value or worth, and therefore, should have the power to make moral choices and rational decisions, and to do so for self-determination. (Guyer 2003)
66. Autonomy does not extend to persons who lack capacity to act autonomously. Thus, children, adolescents, or individuals who have disorders that prevent capacity or competency lack autonomy. (Grisso 1998) Autonomy is at its most important as the doctor considers patient rights and preferences.
67. Truth-telling is the principle that doctors must not withhold information, nor

misrepresent it, but rather provide information plainly and honestly to the patient, so that the patient or parent can, in turn, demonstrate full understanding in order to provide voluntary consent. Informed consent is at its most important in discussing treatment options, and truth-telling is critical throughout patient care.

68. Confidentiality is maintaining the patient's privacy. This must apply to all domains of treatment.
69. Justice is the fair, equitable, and appropriate treatment of persons. Distributive justice is the equitable distribution of health care resources determined by justified norms. This standard is at its most important in the discussion of external forces and context for a patient, including their cultural, spiritual, religious, and economic beliefs and circumstances. (Fleischacker 2005; Varkey 2020)
70. In providing care for gender dysphoria, or for any other medical or mental health condition, these ethical standards must be adhered to.

II. Informed Consent as an Ethical Standard in Minors

71. The principle of informed consent rests upon the moral and legal premise of patient autonomy. In all populations, informed consent must balance the respect for patient autonomy with the protection of patient vulnerability. (Appelbaum 2007) This is particularly relevant as it applies to minors.

72. The informed consent process requires that certain criteria be met, and these are dependent on development (neurologic, cognitive, psychosocial) and experience. Informed consent involves the following principles: a) decision-making capacity, b) full disclosure of medical options, c) comprehension, and d) voluntary consent. (Grisso 1998) Voluntary consent is one's agreement to the intervention, without coercion or distress. Explanation of the other principles, and the neurodevelopmental requirements for each, follows.

A. Decision-Making Capacity

73. To provide informed consent, one must have the ability to make the decision at hand. In a model of assessing decision-making capacity in children, Miller et al. identified cognitive development and experience as being pivotal. (Miller 2004)

74. In an article published in BMC Pediatrics, researchers expanded on this by undertaking a multidisciplinary approach to describing capacity in their research. Taking from neuroscience research concerning the developing brain, and other fields such as psychology and decision-making science and ethics, they highlighted the development necessary to meet the four standards for capacity. (Appelbaum 2001) They then identified certain neurodevelopmental skills and abilities that needed to be developed for each standard to be met. (Grootens-Wiegers 2017) These skills include:

A. The ability to communicate a choice: This is the least rigorous standard for decision-making capacity. To consent to treatment, a person needs to be able to communicate that there is a choice to be made and a preference of treatment, via written or spoken language. This neurologic skill is “communication”, either spoken or nonverbal. Nonverbal communication is an indication of dissent or implicit consent, but not legal consent. Hence, this standard depends on language development, which is initiated in early childhood. Children have a reasonable understanding of language by age five, with refinement continuing until age nine. Further development of vocabulary and expression occurs throughout adolescence. (Shaffer 2007)

B. The ability to understand: In order to understand information presented about diagnosis and treatment options, and comprehend what choices for treatment are, and that a choice needs to be made, a person must be able to orient and direct attention to information. They must have sufficient intelligence, language proficiency to process the information, and memory and recall to integrate information beyond the short term. The foundation for this is laid down during infancy. Maturity in orientation and attention develops from ages seven to ten. (Rueda 2004) Memory increases between ages six and twelve, and then increases slightly during adolescence. (Thaler 2013)

C. The ability to reason: One must understand information, and then be able to reason regarding risks, benefits, and possible consequences of treatment. (Appelbaum 2007; Grisso 1997) To do this, one must have the “ability to engage in consequential and comparative reasoning and to manipulate information rationally.” (Palmer 2016) Children, between the ages of six and eight years old, can engage in logical reasoning, and this ability grows from ages eight through eleven, as they use and access their own knowledge. (Markovits 1998) Complex reasoning, about alternative causal relations, develops into adulthood. Risk identification develops strongly between ages six through ten. (Hillier 1998) Although risk identification is mature in late adolescence, adolescents are paradoxically more inclined toward risky behaviors due to the impulse control centers of their brains not having yet matured. (Casey 2015) This is further discussed below.

D. The ability to appreciate: This is the strictest standard of decision-making capacity. It requires that one understand the various options for treatment, and the relevance of those options to one’s personal circumstances, values, and beliefs. Therein, one needs to have the ability to think abstractly and to understand the intangible consequences of a decision. This includes being aware that others have a mind of their own.

(Appelbaum 2001) Many different areas of the brain are involved in this skill. Children start to recognize their own beliefs and desires, which contribute to their personal values and norms, between the ages of three and four. (Shaffer 2007) They begin to understand how these beliefs influence their actions. As an individual ages, due to the efficiency of working memory, one can think about more abstract and hypothetical things. (Markovits 2013; Pike 2010)

75. Capacity judgments should also take into consideration the factors, or circumstances and stressors, that affect minors in decision-making competency (competency being a legal decision). These are: personality (the child's predisposition to view information a particular way), emotional state (which can be seen as a motivator for information and preferences), and disease severity (which can affect understanding, retention of information, and reasons to consent).

76. Additionally, the minor's decision-making capacity for medical treatment should be assessed in the context of parental and clinician attitude and influence. (Miller 2004; Alderson 1992; Mann 1989)

77. Finally, the minor's capacity should also take into consideration the type and complexity of the decision, the setting, and the timing of the decision and time constraints.

78. Decision-making capacity can be considered in terms of neurodevelopment, psychosocial development, and cognitive development. Each is considered below.
79. **Neurodevelopment.** The MacArthur Competence Assessment Tool is often used to assess medical decision-making capacity. It was shown to be valid and reliable in children. (Palmer 2016; Appelbaum 2001) In a group of children six to eighteen years of age, it demonstrated that age limits for children to be deemed competent were estimated as early as 11.2 years old. (Hein 2014; Hein 2015) However, the authors point out that the cut off age of 11.2 years does not imply competence for any decision, in any situation. Rather, it is an age when, given favorable environmental factors, competency may be considered. (Hein 2014) Furthermore, with adolescence approaching, a child this age will continue to experience specific events in brain development that influence competency. (Appelbaum 2001) As noted by Hein et al. in a 2015 study, “[C]hildren may differ from adults by not having developed yet stable long term goals and values in life, meaning that children may procedurally be classified as competent although their decisions are based on values that might change. This could imply that later on they might regret decisions based on those early-life values.” (Hein 2015)
80. These specific events in adolescent brain development (Appelbaum 2001)

contribute to a non-linear increase in decision-making competency from ages twelve to eighteen. During this adolescent stage of development the most significant changes in the brain have to do with processing rewards and risks, and self-regulation. Because of this, adolescence is often marked by risky behaviors, sensation seeking, and high prioritization of peer influences when making decisions. This also is the explanation for the higher rates of health issues and mortality in adolescents. (Steinberg 2004)

81. The increase in adolescent decision-making competency is non-linear due, in part, to “cross talk” between various brain structures during development. The three areas of the brain that are developing during adolescence and that pertain to decision making are the pre-frontal cortex (the brain’s control system), the ventral striatum (the reward system), and the amygdala (the emotional center). The “cross talk” between these structures is not fully developed until early adulthood. (Steinberg 2013)
82. The prefrontal cortex is involved in impulse control and self-regulation. The ability to self-regulate develops significantly by age eighteen, and then further into early adulthood. The prefrontal cortex also is involved in functions that require control, like paying attention, planning, organizing tasks, weighing risks and benefits, and processing more complicated decisions. (Gogtay 2004)

83. The ventral striatum is pivotal in the brain's reward system. It produces dopamine in response to rewards. During adolescence, the reward system is hyperresponsive. (Van Leijenhorst 2010) This means that the dopamine response to reward is much higher and is associated with increased reward seeking and sensation-seeking. This heightened responsiveness applies even to "small" rewards, making the positive effect of small rewards greater than in adults. Hence, "in a dilemma in which there is a small chance of reward, this reward may be attributed such a high value that the situation is no longer perceived a dilemma by the adolescent and there is only one path to choose." (Steinberg 2004)

84. The amygdala is involved in emotional processing and input to the reward system. The maturation of the amygdala stabilizes in late adolescence.

85. There is a mismatch in timing and pacing between the development of the amygdala, the ventral striatum, and the prefrontal cortex. The control system in the prefrontal cortex develops slowly and is last to complete maturation in early adulthood, whereas the reward system and emotional input system (ventral striatum and amygdala) begin change in early adolescence and complete maturation at a quicker pace. This accounts for the fact that even though adolescents can estimate risk or make responsible decisions, they often end up in precarious and risky situations and their behavior is not always

consistent with their capacities. This also accounts for their often “too quick” decision making. Adolescents are prone to picking pathways with more immediate reward, regardless of consequences or consideration of other pathways. (Mills 2014; Steinberg 2013)

86. Consider, as a simple example, the “kid in a toy store” scenario. Children and adolescents are more likely to choose a flashy toy or item that they encounter first and feel instantly drawn toward rather than waiting to explore the rest of the store where they may find toys and items they like even more and that are more valuable. They seek out immediate gratification and pursue impulse-driven choices when confronted with reward stimuli rather than contemplating other options that carry the same or better reward but entail delayed gratification.
87. Steinberg puts it another way by discussing “hot” and “cold” contexts. An emotionally laden context is hot, whereas a minimally emotional context is cold. When emotions play a role in a situation, this can influence the decision-making process and the outcome. In adolescence, risk taking in a cold situation may be similar to that in children and adults. However, in hot situations, risk taking is increased, and this affects decision-making severely. This explains “the often-risky decisions adolescents make, seemingly only thinking about short term rewards, even though afterwards they can

reasonably assess their ‘leap in judgment.’” (Steinberg 2013; Metcalfe 1999)

88. These neurobiological models of adolescence are summarized in Appendix A. (Ernst 2006; McClure 2004; Metcalfe 1999; Casey 2008)

89. Johnson et al. also report similar conclusions in their work. The brain continues to mature into an individual’s mid-20s. Functional MRI studies show that the prefrontal cortex is still maturing; this is the part of the brain involved with executive functioning and impulse control. Johnson et al. state that “[a]mong the many behavior changes that have been noted for teens, the three that are most robustly seen across cultures are: (1) increased novelty seeking, (2) increased risk taking, and (3) a social affiliation toward peer-based interactions.” (Johnson 2009)

90. B.J. Casey confirmed this in her research on adolescent decision making. Her research concludes that the adolescent brain is more vulnerable when tasked with decision making in emotionally laden situations and in situations with peer involvement. (Casey 2008a; Casey 2008b; Casey 2010; Casey 2013; Chein 2011)

91. Casey’s team studied adolescent response time when pairing stimuli with rewards and incentives. (Hare 2008, Appendix B and C). Naturally, without conscious awareness, people have quicker responses when they associate certain stimuli with positive outcomes or incentives. Individuals have slower

responses to stimuli when there are fewer expected positive outcomes or rewards. (McClure 2004) Representation of rewards and incentives is found in the ventral striatum. Across development, studies show that adolescents activate this deeper region of the brain more than young children and adults. When greater activity is seen in the ventral striatum, it is correlated with a higher degree of risk-taking behaviors or impulsivity. (Casey 2015)

92. Per Casey's research, the presence of peers also influences response time and accuracy for the adolescent. According to studies, when peers are present, adolescents make more errors in social cue interpretation and response time. They react more quickly to incentives and are more drawn to danger and risk taking or impulsive behaviors. Their brains are activated in the areas of the ventral striatum and the amygdala shows heightened activity relative to younger children and adults. (Casey 2015; Chein 2011)
93. Essentially, then, peers serve as reinforcers to influence behavior. (Chein 2011). Jones et al. (2014) developed a social reinforcement learning model to evaluate the degree to which peers reinforce behaviors from childhood to adulthood. The investigators manipulated the probability of the participant receiving positive social feedback from three virtual peers, who provided 33 percent, 66 percent, or 100 percent positive feedback. The results showed that different amounts of positive feedback enhanced learning in childhood

through adulthood. However, based upon response latency measurement, it was concluded that all positive social reinforcement from peers equally motivated adolescents. Furthermore, adolescents, unlike children and adults, had an increase in premotor circuitry when receiving positive social feedback regardless of the expected outcome. (The premotor cortex communicates with other parts of the brain to cause motion.) Hence, peer interactions appear to motivate adolescents toward action. (Jones 2014)

94. Casey concludes that adolescents show impairment in overriding impulses in emotionally charged situations. The imbalance appears to reflect earlier developing emotional centers in the brain and those involved in self-control. Lastly, she states that diminished self-control is transient and continues to develop in adulthood as these brain systems mature with experience. (Casey 2008; Casey 2015).
95. **Psychosocial development.** Children are developing human beings. Children go through several stages of psychosocial development according to Erik Erikson, a developmental psychologist whose theories are utilized across the fields of mental health and development. He stated that children enter the stage of “Industry vs. Inferiority” between ages five and twelve, wherein their major milestone is attaining the virtue of competence. (Erikson 1998)
96. During this stage, a child’s peer group becomes more important. The child

views his or her peers as being highly significant. The child's self-concept begins to form more closely around peer approval or disapproval. Children's reactions of feeling confident or proud, rejected and incapable, often form around their accomplishments and the responses of their peers. If their efforts are reinforced by praise and reward, they feel industrious (or "competent"). They exude a readiness to move past this stage and further along the developmental trajectory. If, however, they feel rejected or disapproved of, they feel inferior ("incompetent"), causing a halt in development and an inability to move forward along the developmental trajectory. (Erikson 1998)

97. Adolescence, which is the next stage, is a time when youth develop the capacity to navigate social situations, and process social cues in more abstract ways. The ability to understand others' perspectives is expanding. Additionally, self-awareness is increasing into late adolescence and early adulthood, and modulating decision making as identity is consolidated.
98. According to Erikson, adolescents ages twelve to eighteen, who successfully moved forward from the former phase of development, enter the stage of "Identity vs. Role Confusion." During this stage, they are searching for a sense of self and identity. They experience intense exploration of personal values, beliefs, and goals. Adolescents begin to analyze and think more deeply about their own morality and ethics, and to determine their individual

identities based upon their life experiences.

99. Body image is critical in this stage of development, and Erikson suggests that two identities are forming: “sexual” and “occupational.” Erikson says that adolescents may feel discomfort with their bodies for some period until they can adapt and grow into the changes. Success in this stage leads to the virtue of “fidelity,” which he defines as the ability to commit oneself to others on the basis of accepting them even where there are differences.
100. Adolescents have a desire to belong to society and to be productive. During this period, those adolescents who fail to form a sense of identity experience role confusion, feeling unsure where they fit into society in the long term.
101. Also, during this stage, youth are particularly impacted by peers, and are seeking to approve of themselves while being approved of by their peer group. Their exploration of their identities is ongoing throughout this stage and not solidified until they reach adulthood. (Erikson 1998)
102. **Cognitive development:** A model of cognitive development in children and adolescents was developed by Jean Piaget, another developmental psychologist.
103. Piaget described children between the ages of 2 to 7 as being in the “preoperational stage” of development. During this stage, children struggle with logic and have difficulty with the idea of constancy. They use their

imagination and engage in pretend play but are concrete in the way they view their immediate surroundings. They also think symbolically and enjoy role play. Their cognitive skills (working memory, attention) are being developed.

104. He stated that between ages 7 through 11 (middle childhood through pre-adolescence), children entered the stage of “concrete operations.” During this stage, children use logic in problem solving, and can engage in inductive (inferential) reasoning. However, they struggle with deductive reasoning, which involves the ability to use a general principle to predict an outcome. They are able to see another person’s perspective. They lack the ability to solve problems that deal with more abstract concepts, while they can solve concrete problems (actual objects or events). They have difficulty with understanding and utilizing common sense, and difficulty applying what they know to more hypothetical situations. (Santrock 2008)
105. Children in this stage also begin to think through social matters differently. Piaget’s theory suggests that during the stage of concrete operations and on into the stage of formal operations, adolescents experience a feeling of uniqueness and invincibility. He refers to this as “imaginary audience” and “personal fable.” Imaginary audience is evidenced by the adolescent always thinking others are watching, and personal fable is the adolescent’s belief that he or she is exceptional in some way.

106. From age 11 through adulthood, adolescents go through “formal operations,” the final stage in Piaget’s theory. An adolescent during this stage is starting to engage more in deductive reasoning (Berger 2016), and is able to consider the hypothetical and “what if?” type of situations. The adolescent’s metacognition is also developing, which is the awareness and understanding of their own thought processes.

107. Piaget’s theories were rooted in observation and testing and are still utilized in our field. Neuroscientific developments through functional imaging have helped refine our understanding of his cognitive development theory.

108. To summarize, neurological, psychosocial, and cognitive development in the child and adolescent all play a role in the determination of decision-making capacity.

B. Full Disclosure

109. To provide informed consent to treatment, a patient must be given full disclosure. (Varkey 2020) This must include: a) an explanation of the diagnosis and how it was arrived upon, b) information about the diagnosis and what is known regarding outcomes, c) the options that the patient has for treatment (including no treatment), d) the risks and benefits surrounding each treatment option, including those risks and benefits that are unknown, and e) the likelihood of the risks and benefits (occurring over the short and long term)

for each treatment option.

110. Additionally, the physician must present details of the treatment options, including but not limited to, the preparation for the treatment that is necessary, and the follow up that should occur afterward for the best outcomes.
111. The physician should have knowledge of the subject area, and be objective in approach, placing the decision in the hands of the patient. The physician's role is to provide information and education to the patient based on expertise and to allow the patient to voluntarily consent.

C. Comprehension

112. Comprehension in the informed-consent process requires that the patient understand the diagnosis, the treatment options, and risks and benefits. To demonstrate comprehension, patients are asked to explain these things back to the physician in their own words, indicating that they intellectually have grasped the content. Adolescents are developing the ability to engage in deductive reasoning as they grow toward adulthood. They can consider the hypothetical, which makes their ability to think about abstract consequences of treatments possible as they mature. However, it is important to note that the adolescent brain's ability to "appreciate" is evolving throughout adolescence and into adulthood. Hence, being able to fully appreciate outcomes of treatment, particularly those that are more abstract, is difficult

through this period. Additionally, adolescents are still prone to impulse-driven decisions that end in more immediate gratification or reward, regardless of risk.

III. Parental Consent with Child Assent When Minor Informed Consent Is Unattainable

113. An adolescent's capacity and competency are not assumed in most cases, and parents are generally seen as medical decision makers for them. The rationale underlying this presumption is that “parents have what children lack in maturity, experience, and capacity for judgment when making difficult life decisions.” (Diaz 2015).
114. There are exceptions to parents’ ability to provide consent for the minor. In certain circumstances, a state may substitute its judgment that a medical procedure is in a child’s best interests, even if parents do not consent. Likewise, a state may determine that a medical procedure is *not* in a child’s best interest, even if parents attempt to give consent — an example being parents seeking to permit sterilization of their children.

GENDER DYSPHORIA AND INFORMED CONSENT IN MINORS

115. As explained above, informed consent requires that a patient have decision-making capacity, which includes the ability to understand, reason, appreciate, and comprehend the information presented in a full disclosure of a diagnosis, its prevalence, available treatments, and the treatments’ risks and benefits.

There are at least two problems with this within the minor population when it comes to gender dysphoria.

116. First, patients must understand, reason through, and appreciate that the prevalence of gender dysphoria has been on the rise in adolescents, and there has been little research as to contributing factors. Additionally, there are a host of other co-occurring issues that need to be weighed in navigating treatment direction. Patients must understand that when these factors and co-occurring issues are brought to conscious awareness in therapy, gender dysphoria is often transient and remits. This is, at minimum, a difficult task for minors to understand.
117. Second, when considering treatment options for gender dysphoria, patients must be able to appreciate and weigh their options. The option of exploratory therapy inherently has far less risk than undergoing medical gender transition, but it takes time and considerable emotional investment as it explores the various systems in an adolescent's life. Albeit very fruitful and with minimal risks, it can still be emotionally taxing. Research confirms that adolescents devalue delayed outcomes relative to adults. (Huang 2017) Adolescents are less inclined to plan ahead or anticipate the future consequences of their actions before acting. (Steinberg 2009).
118. Gender affirming care and medical transition may appear to be "quicker"

answers to dysphoria and internal discomfort, as they aim to directly and immediately validate the adolescent's feelings about becoming the opposite gender, and they summarily dispense with any need to understand or explore causation. Considering both options, the impulse-prone adolescent is likely to find the latter far more rewarding.

119. In order for the minor to provide informed consent, the adolescent would need to be developmentally capable of appreciating the long-term consequences and risks of each option, and to be able to supersede impulse and desire for reward (to become the opposite gender), and attribute both options equal consideration. This requires complex deductive reasoning, planning, and thinking through future hypothetical life events like the desire to have children and potentially breastfeed. They would have to be able to fully comprehend and appreciate the debate over medical gender transition side effects, risks, benefits, and outcomes, and the issue of data quality. The complexity of the debate over the safety and outcome data is remarkable, and essential for the patient to understand as the potential risks involved can affect a minor patient's entire life. This particular task, in my opinion, is insurmountable for a minor patient.
120. These two barriers and necessary prerequisites to minor informed consent —
 - (1) the requirement to understand, reason through, and appreciate that the

prevalence of gender dysphoria has been on the rise in adolescents, that there has been little research as to both contributing factors, and the long-term effects of suggested medical interventions; and (2) that there can be a host of other co-occurring issues that need to be weighed in navigating treatment direction — are discussed further below. These details must be adequately and sensitively considered by all persons involved in the informed consent process to accurately ascertain and preserve the range of informed choices and effective options available to the patient. This more detailed discussion of these prerequisites and barriers will be followed by a discussion of why parental consent with minor assent should not be sufficient in the case of medical or gender transition.

I. Minor Gender Dysphoria Prevalence and Informed Consent

121. When the prevalence of a particular presentation increases, regardless of what presentation is, physicians must first ask themselves what factors are leading to the increased prevalence and what co-occurring issues are also presenting.
122. For example, if there were an increase in the prevalence of hypertension (high blood pressure) in teenagers, physicians would naturally craft a two-pronged response. One would be tailored to the potential factors that have led to the heightened prevalence, and the second would be tailored to any co-occurring conditions they see accompanying the hypertension in the event that those are

linked or causative. They would not simply advise all teens with hypertension to take medications that could carry associated risks. They would first take measures to address factors that may affect prevalence, like an increase in sugar consumption among youths, or an increase in cultural acceptance of childhood obesity. Second, they would also take measures to address co-occurring factors like obesity, stress, and sedentary lifestyles. Patients would be informed of these factors and co-occurring issues, and physicians would help each patient to appreciate them and to address them with education about the effects of obesity and too much sugar and about the need for improved diet, exercise, and stress-relieving measures. While these interventions may take time in comparison to medicines that relieve hypertension quickly, they would carry far less risk to the adolescent.

123. Second, when looking at increased prevalence of a presentation, physicians should ask themselves if the presentation is transient or continual over a meaningful span of time. Patients, in the informed-consent process, would need to know if their diagnosis is one that can resolve over time, if it is permanent, whether or not it requires immediate treatment, how soon it might require an intervention that entails proportionally significant risk, the relative likelihood or probabilities of all of the above, and how all of this information relates to the reliability of existing research and the current frontiers and limits

of scientific inquiry.

124. For example, if teens were showing signs of mood lability through a particular stage of puberty, physicians would look at whether the lability was transient, and whether it would resolve completely on its own. If a known external cause was identified, they would seek to address it. If it were determined to be transient and a normal part of youth maturation, then physicians would likely provide support through that stage and see if the lability declined naturally. If not, they'd address it later.
125. Taking a second example, in mental health, if a five-year-old patient presented with difficulty with affect regulation, as well as trouble focusing and being still in the classroom, most physicians would not diagnose ADHD on initial assessment. The diagnosis and labeling of ADHD carelessly or prematurely can have negative implications for the child. Rather, they would investigate what other issues are happening in the child's life, and consider the child's development, family history, abilities according to a psychoeducational assessment, teacher input, the way the child learns, his classroom structure, social skills, and his stressors. Additionally, they would consider that children who are five years of age are in the developmental stage of initiative vs. guilt, and the milestone of this stage is "purpose." The child is learning to navigate social rules and gain self-regulation. From a neurodevelopmental perspective,

the child's brain is presently at the stage in which impulse control centers, motor centers, and expressive language centers are not yet fully matured, and hence, his behavior may be merely a result of him needing to grow more. Any treatment interventions beyond parental guidance, teacher guidance, and therapeutic support may be unnecessary or even detrimental as risk would likely outweigh benefit. Further time and observation would allow physicians to gain a better understanding as to whether the child will outgrow these behaviors, or whether they will be sustained once he grows and other factors resolve. The child and his parents, as part of informed consent, would need to know that these behaviors sometimes pass on their own with maturation. They would also need to understand the evidence (or lack thereof), risks, and benefits of all treatment options that are available if these behaviors did not resolve with maturation.

126. With regard to gender dysphoria, the heightened prevalence in recent years should cause physicians to identify possible contributing factors and co-occurring issues, and then craft a two-pronged response that addresses these, all prior to recommending medical transition which entails risk. Patients need to be able to understand, reason through, and appreciate these factors and co-occurring issues and have the opportunity to explore them prior to considering transition. The factors I've observed to contribute to the heightened

prevalence of gender dysphoria are an increase in “pathologizing” of a normal part of childhood development, shifts in cultural norms having to do with gender exploration in adolescence, the influence of social media, heightened vulnerability in youth, and what some call “social contagion.” Some co-occurring issues that I have observed are trauma, depression, anxiety, autism spectrum disorders, influential gender-role experiences, vulnerability and a lack of feeling socially accepted, and the influence of social media. These are identified and addressed as the patient goes through the therapeutic process and supports for the patient are also harnessed. As part of informed consent, patients should understand and appreciate that when these issues are addressed, frequently gender dysphoria is transient and remits. As stated above, this understanding and appreciation is an extremely difficult task for adolescents.

II. Minor Treatment Recommendations and Informed Consent

127. Major medical associations, including WPATH, have endorsed puberty suppression and cross-sex hormones as treatments for youth with gender dysphoria. Patients, in the informed-consent process, need to be able to understand, reason through, and appreciate the limits of medical knowledge and the issues that are of ongoing debate regarding gender transition, including the debate over long-term outcomes, safety, and potential risks.

128. The WPATH SOC-8, in its adolescent chapter, states: “We recommend health care professionals working with gender diverse adolescents undertake a comprehensive biopsychosocial assessment of adolescents who present with gender identity-related concerns and seek medical/surgical transition-related care, and that this be accomplished in a collaborative and supportive manner.”

(Coleman 2022, Recommendation 6.3) It goes on to state:

The following recommendations are made regarding the requirements for gender-affirming medical and surgical treatment (All of them must be met):

6.12- We recommend health care professionals assessing transgender and gender diverse adolescents only recommend gender-affirming medical or surgical treatments requested by the patient when:

6.12.a- the adolescent meets the diagnostic criteria of gender incongruence as per the ICd-11 in situations where a diagnosis is necessary to access health care

6.12.b- the experience of gender diversity/incongruence is marked and sustained over time.

6.12.c- the adolescent demonstrates the emotional and cognitive maturity required to provide informed consent/assent for the treatment.

6.12.d- the adolescent’s mental health concerns (if any) that may interfere with diagnostic clarity, capacity to consent, and gender-affirming medical treatments have been addressed.

6.12.e- the adolescent has been informed of the reproductive effects, including the potential loss of fertility and the available options to preserve fertility, and these have been

discussed in the context of the adolescent's stage of pubertal development.

6.12.f- the adolescent has reached [T]anner [S]tage 2 of puberty for pubertal suppression to be initiated.

6.12.g- the adolescent had at least 12 months of gender-affirming hormone therapy or longer, if required, to achieve the desired surgical result for gender-affirming procedures, including breast augmentation, orchectomy, vaginoplasty, hysterectomy, phalloplasty, metoidioplasty, and facial surgery as part of gender-affirming treatment unless hormone therapy is either not desired or is medically contraindicated.

(Coleman 2022, Recommendation 6.12)

129. On page S5 of the WPATH SOC-8 guidelines, the Introduction presents the guidelines as reliable, comfort-oriented, safety-oriented, and evidence based. “The overall goal of the . . . (SOC-8) is to provide clinical guidance to health care professionals to assist transgender and gender diverse (TGD) people in accessing safe and effective pathways to achieving lasting personal comfort with their gendered selves with the aim of optimizing their overall physical health, psychological well-being, and self-fulfillment.” The introduction continues: “WPATH envisions a world wherein people of all gender identities and gender expressions have access to evidence-based health care, social services, justice, and equality.” In the next paragraph, WPATH assures readers that “[o]ne of the main functions of WPATH is to promote the highest standards of health care for individuals through the Standards of Care (SOC)

for the health of TGD people,” and that “[t]he SOC-8 is based on the best available science and expert professional consensus.” The Abstract itself, in the Methods paragraph, expressly offers the following assurance:

The SOC-8 is based on the best available science and expert professional consensus in transgender health. International professionals and stakeholders were selected to serve on the SOC-8 committee. Recommendation statements were developed based on data derived from independent systematic literature reviews, where available, background reviews and expert opinions. Grading of recommendations was based on the available evidence supporting interventions, a discussion of risks and harms, as well as the feasibility and acceptability within different contexts and country settings.

(Coleman 2022)

130. Reading these statements, the natural assumption of patients, parents, caregivers, and many physicians is that the factors contributing to gender dysphoria have been well established and that based on those factors, “seek medical/surgical transition-related care.” (Coleman 2022, Recommendation 6.3) It is further assumed that when the recommendations above are followed with minors who have gender dysphoria — directing the patient to gender-affirming care, then on toward medical suppression of puberty, cross sex hormones, and gender reassignment surgeries. — these interventions will automatically be the best course of treatment. Furthermore, the WPATH recommendations leave ample room for physicians, patients, and parents to erroneously assume that recommendations for medical and surgical gender

transition are evidence-based, that is, founded in rigorous scientific inquiry through randomized controlled trials and long-term follow-up studies that affirmatively show positive medical and psychological outcomes and established safety records. Lastly, the physician and the patient (and parent) might naturally assume that the quality of the studies must be high, given that altering the natural course of development in youth is a significant measure; that it is relatively new; that it is not something that the medical community has engaged in historically; and that common sense would indicate that such major interventions generally would only be justified on the basis of thorough deliberation, ample and solid research, and strong evidence.

131. However, there is remarkable controversy and debate over these recommendations and the data that supports them.
132. While physicians can understand and appreciate the controversies that follow below, in my view adolescents are not developmentally able to do so. Their neurodevelopment and proneness to impulse-driven decisions make it highly possible that they will disregard or undervalue the critical issues of controversy and debate and move forward with assent/consent to medical or surgical transition, all to achieve the perceived reward of achieving secondary sex characteristics of the opposite gender.
133. I believe that several issues must be fully considered and appreciated by

patients in order for them to be able to provide appropriate informed consent. However, many of the most vital issues cannot be sufficiently appreciated in adolescence. These issues are listed below:

- The Dutch Studies have been foundational in the formation of the WPATH recommendations but are suspect in terms of their quality and their applicability to the patient population currently presenting in America. “Several recent international systematic reviews of evidence have concluded that the practice of pediatric gender transition rests on low to very low quality evidence—meaning that the benefits reported by the existing studies are unlikely to be true due to profound problems in the study designs.” (Abbruzzese 2023)
- Gender dysphoria is the only diagnosis that I am aware of for which an alteration of bodily integrity is being clinically advised for the purpose of affirming identity.
- There is debate over the quality of data used in studies assessing links between suicide rates and gender dysphoria, including the change in suicide rates post-transition.
- The WPATH recommendations state that only one comprehensive psychological assessment should be required for minors in order to proceed to transition. (Coleman 2022) Patients should understand that

such co-occurring health concerns and issues accompanying gender dysphoria take time to identify, and one comprehensive assessment is not sufficient to do so for any practically condition in mental health.

- The WPATH recommendations state that decision-making capacity has to be determined in each adolescent wanting to undergo gender transition based on each adolescent's development. (Coleman 2022) But WPATH elides the crucial issue: both patients and parents/guardians should understand that it is not well established that adolescents can *ever* meet such requirements for decision-making capacity when they are offered non-emergent treatments that substantially affect bodily integrity and that have potentially life-long irreversible consequences on reproduction and multiple other bodily systems.
- There is significant debate about whether the majority of children and adolescents with gender dysphoria realign with their birth sex with time and maturation.
- There is debate as to the lack of studies that evaluate the factors that are leading to the heightened prevalence of gender dysphoria.
- Patients and their parents must understand that while gender medicine experts claim minimal risk with puberty blockers, this is highly controversial. They should also understand that almost one hundred

percent of those taking puberty blockers go on to receive cross-sex hormones. Hence, even if puberty blockers themselves were of low risk, the trajectory of medical gender transition includes cross-sex hormones, which render a patient infertile.

- There is additional debate over the long-term side effects and consequences of the medical transition trajectory, including but not limited to potential problems with bone growth, brain maturation, metabolic function, endocrine function, sexual health, psychological function, and reproductive capacity.
- There is debate as to whether minors can appreciate the potential impact that infertility can have on an individual's psyche should they one day desire to have children.
- There is insufficient data on detransitioners, and there is literature that states that those who detransition may not access adequate follow up or support.
- The interplay between gender dysphoria and common co-occurring conditions, and how treating those conditions may affect an individual's gender dysphoria, have not been adequately studied.
- Alternative approaches to treating gender dysphoria have not been adequately studied.

134. In my experience, the task of understanding, reasoning through, appreciating, and comprehending the above matters is insurmountable for adolescents.

135. Furthermore, I don't believe that parents should be able to provide medical consent with minor assent for medical gender transition. This is because the debate that exists has to do with the safety of treatments that affect the bodily integrity of the minor, and there is debate as to the long-term outcomes of such treatments. Many of these debated outcomes would stand to permanently affect the quality of life of the minor, in multiple arenas such as romantic relationships, marriage, sexual intimacy, childbirth, child rearing, self-concept, social and workplace relationships, potential adversity due to discrimination, and long-term psychological and medical health. In my opinion, for a parent to provide consent to non-emergent treatments that stand to affect the rest of a minor's life in every arena, and to do so without the minor's full ability to appreciate the above debate and potential long-term ramifications, violates the minor's future right to autonomy.

TRAUMA AND GENDER DYSPHORIA

136. Children and adolescents with gender dysphoria who have been through trauma may have an even greater difficulty with appreciating and weighing the various treatment options for gender dysphoria. Trauma affects how children and adolescents process the world around them, how they interact

and engage in relationships, how they perceive various events and situations, and how they react and behave. Trauma influences the way individuals perceive their own bodies. Their sense of bodily safety and how they feel about their outward appearance is often significantly affected. The risk in offering medical or surgical transition to adolescents who have gender dysphoria and a history of trauma is that they may find gender transition to be appealing and a “quick fix” to their complex internal emotions and feelings about their bodies. This may stand in contrast to a child or adolescent’s perception of trauma-focused therapy modalities that are directed at helping an individual work through, process, and recover from trauma, as these treatments take an extensive amount of time (months to years) and are emotionally very difficult. While trauma-focused therapies are data-driven and effective and allow an individual to experience healing and then to make more consequential life decisions, the child or adolescent may not give them consideration when perceiving that medical or surgical transition would help them to feel better faster by changing how they feel about their body. It may prove tempting to try and resolve internal woundedness by changing external appearance, but an adolescent is likely to experience regret after transition if the internal woundedness is not first addressed through the therapeutic process.

137. Trauma can be due to a number of different experiences. Trauma arises when there is a “failure of the natural physiologic activation and hormonal secretions to organize an effective response to threat.” In early childhood development, the orbitofrontal and limbic structures in the brain mature in response to the caregiver. Dysfunctional associations in this relationship between caregiver and child result in permanent physicochemical and anatomical changes which impact the child’s developing personality and behaviors. Children who have been exposed to ongoing stress lose the ability to use their own emotions to guide effective actions. They often cannot recognize their own feelings, and so they are not able to respond appropriately to stressors. The inability to identify emotional states also often affects the child’s ability to recognize others’ emotions. Due to difficulty in regulating their own internal state, they become very reactive to their environment. They respond with emotion and impulsivity, behaviors that are often an externalization of the chaos and stress they feel inside. (Trauma Recovery Institute)

138. Trauma can occur outside the parent-child relationship. Exposure to domestic violence, abuse, neglect, animal abuse, poverty, substance abuse, bullying, disasters, loss of a loved one, or parental illness can cause similar psychological and physiological responses in children. Some forms of

trauma, particularly interpersonal trauma and abuse, place children and other survivors at increased risk of future trauma because past experiences of victimization are associated with an increased risk of subsequent victimization. (Jaffe 2019)

139. Trauma can cause:

- Loss of self worth
- Heightened Reactivity (e.g., explosivity and anger outbursts)
- Hyperarousal
- Withdrawal from others or avoidance
- Difficulty with trusting others
- Shame
- Loss of danger cues
- Loss of a sense of self
- Poor self-esteem
- Hypervigilance
- Confusion or feelings of being lost
- Depression and anxiety
- Impulsivity
- Negative body image and desire to hide body or change appearance
- Oversexualized behavior or sexual avoidance

- Dissociation
- Hallucinations or Re-experiencing
- Flooding
- Frequent somatic symptoms
- Enuresis (bedwetting)/encopresis (soiling)
- Body inflammation or repeated infections, autoimmune problems

140. Trauma impacts every system in the body: gastrointestinal, genitourinary, endocrine, cardiovascular, neurologic, and immune systems. (Heim 2008) With regard to neurodevelopment, functional neuroimaging of children and adolescents exposed to maltreatment has shown executive, attentional, and affective emotional dysregulation. (Mueller 2010).

141. Children do not generally disclose trauma on initial assessment. Disclosure can take months and sometimes years. Children must experience safety within the therapeutic relationship, which takes time and patience to establish. As therapy continues, children will disclose trauma when they feel safe enough to do so and trust the examiner's response.

142. Trauma treatment (psychodynamic therapy and trauma focused cognitive behavioral therapy) focuses on a) education surrounding trauma; b) identification of feelings and emotions; c) understanding safety and practicing mindfulness, relaxation, and the ability to calm the sympathetic nervous

system; d) exploration and processing of the trauma and its effects through a trauma narrative in a safe therapeutic setting; e) harnessing family/loved one support and validation; f) clarification where appropriate; g) building a healthy self-concept; h) a reorientation to the environment through awareness that trauma can impact all arenas of life; and i) continued support. The goal in recovery is for the individual to heal emotionally, to have internal and external ability to self-regulate and respond to stress appropriately, and to be able to engage in relationships in a healthy fashion. This type of treatment takes time, as there must be patient-therapist rapport and adequate trust laid down as a foundation.

143. Due to the effects of trauma on all bodily systems, and its effects on self-concept and body image and appearance, it is critical to realize that it can contribute to gender dysphoria. Explorative (psychodynamic) therapy and Trauma Focused Cognitive Behavioral Therapy is important to help the patient identify, process, and work through trauma in order to ensure that the patient is not experiencing gender incongruence due to the trauma itself. This information is valuable to patients as they navigate and chart their own courses through their unique, individual processes of healing and growth.
144. Research suggests relatively higher levels of reported trauma among children with gender dysphoria and among transgender and gender-nonconforming

adults. In one study that considered relational trauma up to age 14 within primary relationships:

Results showed that 10% of GD participants had not experienced any early adversity, 13% had experienced one form of trauma, 8% had experienced two forms, 13% had experienced three forms and 56% had experienced four or more forms. In the control group, 30% of participants had not experienced any form of trauma, 37% had experienced one form of trauma, 16% had experienced two forms, 9% had experienced three forms and 7% had experienced four or more forms.

(Giovanardi 2018) Another study reported similar findings. (Schnarrs 2019)

145. Timely and compassionate assessment, diagnosis, and trauma-informed treatment is likely to meaningfully improve long-term outcomes for children with gender dysphoria, whether they come to identify with their natal sex or whether they persist in their transgender identity.
146. It has been my clinical experience that when youths with gender dysphoria are treated with psychodynamic therapy, and a history of trauma is identified and subsequently treated, gender dysphoria often remits or resolves. In other cases, youths have gained clarity about how trauma has affected them and can move forward as adults with the ability to make mindful decisions surrounding gender dysphoria treatments. Each of these children deserves the option to achieve this clarity, treatment, education, and support, regardless of which options they ultimately choose.
147. Because actual patient cases cannot be discussed in this report, I have

provided four hypothetical situations based on my experiences to illustrate how trauma affects gender incongruence and gender dysphoria, and when treated, can result in its resolution or provide clarity for future treatment decisions.

- a. A female teen describes gender dysphoria. She wants to be called “she/her” and not change pronouns yet because she is worried that her grandmother may find out about her gender dysphoria and be angry.

On initial assessment, it becomes clear that she experienced maternal abandonment at a young age.

Over the course of therapy, she says has a vivid recollection of her mother leaving her at her grandmother’s home and not returning. Her grandmother is emotionally and physically abusive toward her often and a child protective report has to be filed. She has remarkable difficulty in trusting others and isolates herself socially due to fear of not being accepted. She has been bullied by female peers. She says that she is unsure of others’ responses and fears rejection. Inside, she feels persistently anxious, struggles to enjoy normal activities for girls her age, and describes feeling uneasy. She expresses that she identifies as male. When her perception of gender roles is explored further, she talks about women being angry, uncaring, and harsh. She describes

wishing she'd had a father who had protected her and kept her safe. She says she always thinks about how she could have kept herself safe and struggles with guilt and shame associated with the abuse because she believes she allowed it to happen.

As trauma-focused treatment is provided, she learns about the effects of trauma and what emotions survivors struggle with. After working through her trauma narrative, she realizes that her identification with male gender is due to an unconscious desire to protect herself from abuse, and to be strong enough to “fight it,” and to not feel anything in common with the females in her life who have been neglectful, abusive, and wounding. This conscious awareness allows her to begin recovering. She learns new ways to feel in control and safe and learns to identify her feelings and process them and use logic alongside emotion in decision making and in relationships. Over the course of many months, and ongoing support and psychodynamic therapy, she realigns with her natal sex. She says she feels safe and in control of her own body now.

- b. A male teen is nonbinary and prefers to be called “they/them.” On initial assessment, they report having been bullied at school and not fitting in since a very young age. They have suffered from ADHD

related impulsivity and reactivity and often got in trouble in elementary school. Peers were unkind and often refused to eat with them at lunch or play with them at recess. Due to ADHD medication side effects, they reported being very thin and feeling awkward. As other kids developed and boys became more athletic, and girls developed breasts, they described feeling uncomfortable in their body because they remained thin, lanky, and of short stature through middle school. Last year, while being online playing video games, they met a couple of transgender peers online. They began to get to know one another and establish friendships. This was the first time they felt connected and safe. Engagement with them during daily gaming became routine, and they got to know one another and built friendships. They began to learn more about gender incongruence online and began to feel that they were nonbinary and that maybe this was why they never fit in and felt so anxious socially. They discussed this with their friends online, and friends supported gender exploration and made statements that they “knew the feeling” and “were there for them.”

In exploratory therapy, they discuss several incidences of bullying that were traumatic and caused marked emotional harm. Trauma focused-therapy is initiated, and they are able to bring to conscious awareness

past feelings of being trapped, of being unwanted, being unworthy, and being unloved by others. They also identify fear of bodily harm due to bullying and wanting to go unnoticed by peers at school to preserve a sense of safety. As they learn ways to identify and work through the intense emotion that accompanies memories of past trauma, they begin to realize that being gender nonbinary has allowed them to feel safer. It has been a way to describe a deep feeling of discomfort with their own body and a feeling of being different. Having made strong friendships with transgender peers who also had gone through similar feelings, they realize that identifying as nonbinary allowed them to also feel closer to their friends. Over time, they begin to feel more positively about their own self-concept and friendship making ability, and to use coping skills to work through memories of past trauma. They begin to want to be referred to as “he” and describe realigning with natal sex. He is able to process and understand trauma and its impact on feelings about bodily appearance, bodily safety, and a need for secure relationships.

- c. A female teen has gender dysphoria. She describes wanting to be called “he/him.” He talks about wanting to medically transition and denies any past history of psychiatric issues. He describes having a good

relationship with his mom, and not knowing where his father is, who left their home when he was ten years old. He describes having a history of urinary tract infections, enuresis (bedwetting), and constipation. Medical records are consistent with his description. Throughout early therapy, he talks about his relationship with his mother and how she is dating someone new. He says he doesn't mind, but becomes more uncomfortable when mom's partner moves in. He begins to have difficulty with sleep, and his mother reports that he is very reactive and at times hostile toward her partner. He begins to have enuresis again and also stomachaches.

Over the course of therapy, he eventually discloses that his father had touched his (female) privates several times and shown him naked pictures of girls. Trauma-focused therapy is initiated. He learns about trauma, its impacts, and normal feelings that children experience when victimized. He learns how to calm himself and self-regulate intense emotion through progressive muscle relaxation and deep breathing. He engages in developing a trauma narrative and is able to detail what happened to him over the upcoming many weeks. He talks about past fear of his father that turned into rage and fantasies of fighting his father and making sure that he could never harm anyone again. This brings

to his conscious awareness that identifying as male allowed him to feel power over his abuser and to feel a sense of control. When thinking of being in a male body, he felt safer, and he didn't have to feel the fear and feeling of being trapped that he used to in a female body. Over the course of a couple of years, as he begins to recover from the sexual trauma he'd suffered, through ongoing therapy and support, he begins to come in wearing female clothes. He wants to be called "she/her" and says that she feels more comfortable being female now. She feels safe and in control in her own body.

d. A male teen is struggling with gender dysphoria and prefers to be called by "she/her." She talks about being raised by her single adoptive mother since age four. Her dad was not active in her life. She struggled with ADHD and anxiety throughout elementary and middle school. She struggled with academics and didn't feel like she fit in. She began experiencing gender dysphoria at the age of eleven when she began to develop body hair and sweat and feel "gross." She talks about male features (like her broad shoulders) having made her feel angry when she looked in the mirror.

Through explorative therapy, she began to talk about how she often wondered about her birth family and why she was given up. She

wondered if she looked like her birth father, and she said this thought made her physically ill. She said she'd have panic attacks when looking at her shoulders widening and at hair in her armpits and private areas. As therapy progressed, she talked about having been told her birth father had been in jail and was a drug addict. She wondered if she'd be like him, and this caused her to have tremendous anxiety. She is able to bring to conscious awareness that she felt more comfortable as a female because she didn't want to grow up to be like her birth father, because he abandoned her and was a "criminal."

Through additional work with a therapist specializing in adoptions, she is able to understand that she suffered trauma as a child due to separation from her birth mother, regardless of being moved to a safer adopted home. She is able to learn about the feelings that children who've experienced adoption often go through and understand that her feelings are reasonable and normal. She is able to bring to conscious awareness that her feelings about not wanting to be like her birth father are a normal part of processing her past and considering who she wants to be in the future. She learns from her therapist about neurodevelopment and how the adolescent brain is still developing. With good support from her family in place, she continues in her social

transition, but also continues therapy for support and ongoing processing of her stressors. She decides to medically transition as an adult, and says she feels her decision making is clearer as she has been able to understand her gender identity, come to terms with how trauma has affected her, and be confident in her ability to provide informed consent as an adult with a lesser risk of regret.

CONCLUSIONS

148. In my clinical experience, informed consent is remarkably difficult with minors. Even when prescribing a psychiatric medication, adolescents are most often unable to appreciate the long-term risks, nor are they able to comprehend the details of full disclosure. I find this is secondary to their psychosocial and neurodevelopmental stage of development. They can communicate a choice. They can understand the diagnosis and treatment options to an extent. However, they are less able to comprehend and appreciate the implications of the diagnosis and treatment options long term. Generally, they are focused on “feeling better” and choosing the treatment pathway that leads to feeling better quickly regardless of treatment side effects or risks. Once they have identified the path they want to take, they most often lose sight of other treatment options that may take longer, though they are just as effective at helping them feel well, and with lesser risk. In the setting with

outside influences, this push to choose the path with the immediate reward while devoting less attention to other options, is even more evident.

149. For this reason, with very rare exceptions, I employ parental consent with minor assent in the process of prescribing treatments to minors, and only after weighing the risk/benefit ratio of treatment interventions and providing full disclosure.
150. If there are insufficient evidence-based benefits to treatment, and if benefits do not substantially outweigh risks of treatment, I do not prescribe medication.
151. In the event, that parental consent and minor assent is provided for a medication, but there is an issue of the growing child or adolescent's future autonomy being affected, I do not prescribe, unless there is medical necessity to treat due to an imminent risk to the child's safety or to others if the child is not treated.
152. Individuals with gender dysphoria deserve compassionate care that is not only equitable, but also well thought out, well researched, and well executed. In the matter of medical and surgical gender transition in minors, the overarching questions I ask myself regarding my own patients and the informed consent process, when reviewing all the literature and processing my own clinical experience, are:

- Can youths understand, reason through, appreciate, and comprehend all of the issues with the present data, the ethical dilemmas that are present, and the debate in the medical community?
- Can youths appreciate the future risks that medical gender transition entails, particularly regarding circumstances that only present later in life (like the desire to bear children and breastfeed)?
- Can they understand, appreciate, and comprehend the unknown risks of treatment on brain maturation?
- Can they appreciate and comprehend that there is debate as to whether suicidality improves or worsens post-transition?
- Can they understand the significance of the paucity of data on de-transitioners?
- Can parents provide consent (with minor assent) for treatments that affect bodily integrity, that are appropriately considered experimental due to lack of quality data, that carry marked long-term medical and psychological risk, for which long-term safety and efficacy is unproven, and that have the potential to create irreversible consequences such as infertility? All for the purpose of affirming an identity that has not yet solidified, based on what we know about the developing adolescent?

My answer to all these is, “Absolutely not.”

153. With this context, I draw three primary conclusions:

I. Informed Consent Is Not Attainable for Medical or Surgical Transition in Minors

154. Minors lack decision-making capacity for medical and surgical transition. In my opinion, due to a lack of full neurologic, psychosocial, and cognitive developmental maturation, adolescents are unable to understand, reason through, appreciate, and comprehend the impact of the shortcomings of the present data, the lack of FDA indication for puberty blockers, the long-term risks and consequences of transition, and the low-grade rating of studies that have been used to support medical and surgical transition. Hence, they lack decision-making capacity.

155. As discussed in the section above regarding neurodevelopment and psychosocial development, when there is perceived reward with one pathway, despite long-term risks associated with that pathway, adolescents will generally select it rather than consider that there are alternative pathways with fewer long-term risks. With medical gender transition, adolescents are likely to perceive reward (in this case, reduced dysphoria) with the pathway of puberty blockers and cross-sex hormones and hence, they are likely to choose this path rather than considering other paths (such as engaging in exploratory or supportive therapy, socially transitioning, and waiting until adulthood for medical transition). Additionally, as peer and cultural influences are more

significant in adolescence, adolescents may make more impulsive decisions to pursue medical transition without considering risks. This also factors into a capacity judgment.

156. The risks associated with puberty blockers and cross-sex hormones are difficult for adolescents to comprehend and appreciate. First, the near certainty of infertility on the transition pathway is likely to not be appreciated until the age during which most individuals consider having children. The debate over impacts on hormonal shifts, bone density, cardiovascular risk, and brain maturation are simply too difficult for minors to grasp. Furthermore, effects of transition on more abstract situations that the adolescent may face decades later, such as effects on intimate relationships, sexual gratification, reproduction, breastfeeding, child rearing, family relationships, and self-concept are even more difficult to fully realize. Adolescents have not fully developed the ability to appreciate the treatment options in this context of “later life”, which is part of decision-making capacity. Their deductive reasoning is developing, but not yet complete.
157. Furthermore, while parental consent and adolescent assent is possible for other medical interventions, it is insufficient in the matter of gender transition in minors. First, the risks to the growing adolescent are remarkable, including infertility, irreversible changes to secondary sex characteristics, potential

issues with bone density, cardiovascular risks, metabolic function, endocrine function, reproductive capacity, psychological and medical health, and brain maturation. Second, a parent is unable to determine whether their child will realign with his or her natal sex. This presents inherent risk. Third, the present data supporting the benefit of transition in adolescence is rated “very low quality.” There is no reliable long-term data on safety or efficacy of these treatments.

158. For this reason, I believe that parental consent with adolescent assent for medical gender transition is problematic and can result in long-term detriment to the adolescent that later cannot be reversed. Parental consent may be deemed in the short term to be preserving the adolescent’s autonomy by prioritizing the adolescent’s desire to self-actualize and reduce dysphoria. However, in the long term, there is remarkable intrusion on the growing adolescent’s autonomy as an adult. When the adolescent matures to adulthood and can’t reverse consequences (e.g., fertility) of interventions that the parent consented to without the adolescent having had full capacity to appreciate, psychological repercussions are likely to be profound.
159. Regarding other medical diagnoses, where bodily integrity is challenged as a result of treatment, such as with cosmetic surgery in minors, informed consent has been a central issue.

160. In 2005, in the *AMA Journal of Ethics*, pertaining to teens who desire cosmetic surgery, authors cited The American Society of Plastic Surgeons statement against breast augmentation for patients under 18. In the absence of longitudinal research, they said,

[I]t is impossible for physicians to warn patients, or their parents, about the risks of performing cosmetic surgery on bodies that have not reached maturation, the operative complications and long term physical effects of these surgeries and the psychological implications of surgery on developing body image, or the extent to which distorted body image common among adolescence may result in the pursuit of plastic surgery.

(Zuckerman 2005)

161. During the FDA hearings on breast augmentation, several physicians noted that obtaining meaningful informed consent from teenagers and their parents can often be difficult. According to one speaker, this difficulty is largely related to the fact that the kind of information being given to potential breast implant surgery patients is largely “probabilistic information” and “probabilistic thinking is the most abstract kind of thinking and the last one to develop in the range of skills and capacity that we have.” Several physicians in attendance agreed. Dr. Charles Bailey noted that, “with respect to interacting with the patients, it’s not uncommon to be sitting in front of a very young patient where you feel like nothing that you’re saying is being heard.” This is the exact sentiment echoed by physicians who are opposed to medical

and surgical gender transition in minors, an area in which data is even more controversial and the long-term risks of far greater magnitude. (Cohen Cooper 2014)

162. Furthermore, within my own clinical experience, I cannot envision a circumstance with my own patients wherein parental consent and minor assent would be sufficient for medical or surgical gender transition based on the above explanation. The justification of imminent risk to the child's safety or others around the child is not present. Additionally, not only could proceeding to medical or surgical gender transition profoundly affect the child, but also the parent-child relationship, which is of remarkable concern to me as a child psychiatrist.

II. A Better and More Compassionate Approach is Provision of Therapy Until Adulthood When Consent Can be Provided

163. Gender dysphoria can be a normal part of childhood development, as discussed in the section on my clinical experience above. It should not be labeled or pathologized, as it is most often transient, making a "watch and wait" approach sensible.

164. A compassionate approach to gender dysphoria in adolescents entails: a comprehensive assessment, individual and family therapy, and harnessing a support network for the patient. I have used this approach for years and have found it to be beneficial and far less risky. The child patients I've treated that

meet criteria for gender dysphoria realign with their birth sex with maturation (children) and a “watch and wait” approach. Adolescents most often realign with their natal sex with maturation, therapy, and support. Further, my patients who have decided to transition as adults have been grateful that they waited and that therapy helped them to be sure of their choice. They have felt positively about their decision-making capacity as adults.

165. This approach takes into consideration that medical and psychological risks are far too great to risk providing unproven treatment to a substantial number of minors who would otherwise realign with their natal sex.
166. Additionally, this compassionate approach adheres to ethical standards in the field of medicine, while medical and surgical transition for minors, individually and in combination, substantially risks violating those standards.
167. As an example, beneficence requires that the physician actively promote the welfare of the patient and protect the patient from harm. Regardless of positive intentions to provide relief for the minor with gender dysphoria, when a physician is seeking to use controversial treatments for a diagnosis 1) that has an increasing prevalence 2) for which contributing factors have not yet been adequately identified 3) for which alternative treatment pathways with less risk may not have been well studied 4) that may resolve in children without any intervention or respond to very low risk supportive interventions

in adolescence and 5) could be intertwined with co-occurring conditions that could be treated with low risk interventions first, there should be concern over whether the physician violates the standards of beneficence and nonmaleficence. That is especially true when the risky treatments 1) have marked effects on a minor's bodily integrity, 2) carry significant long-term risks, 3) are unsupported by reliable long-term data about safety and efficacy, and 4) are recommended based on evidence deemed to be of very low quality by systematic reviews.

168. The physician seeking to recommend medical transition to a minor also risks violating the principle of informed consent, considering the minor patient lacks decision-making capacity.
169. If all of the above issues of debate and controversy have not been fully disclosed to the minor patient, and comprehended, the standard of truth telling is also not met.
170. And, lastly, the standard of distributive justice may be violated if the minor patient has not been meaningfully offered available resources such as exploratory therapy, family therapy, and supportive mental health care that may be offered to others in this same situation, given these are low in risk and likely high in benefit.

III. Tennessee Senate Bill I Appropriately Protects Minors

171. Individuals with gender dysphoria deserve compassionate care that is not only equitable, but also well thought out, well researched, and well executed.
172. They deserve to not be subjected to experimental treatments that, to date, lack high-quality studies, long-term outcome measures, and proven psychological benefit. Instead, they should all be afforded well-researched options that entail less risk and are more likely to be effective. They should also receive the time and patience and ongoing support necessary in order to pursue those options.
173. They deserve to have methodologically and scientifically sound research conducted on all possible pathways of treatment, so that they can make well informed decisions as adults about which pathway of treatment they'd like to choose.
174. They deserve to be supported, cared for, and shown that they are valued, as all individuals should.
175. Minor patients with gender dysphoria deserve to be treated with respect for their vulnerability and their stage of development, which makes them unable to provide informed consent. They deserve for their future autonomy to be protected.
176. While their immediate desire for relief needs to be addressed, they also need their desire for long-term happiness honored, as growing members of society.

They deserve to have the capacity to make their own decisions about treatments that would systemically alter their bodies and thereby affect their future relationships, their ability to have children, their ability to breastfeed, their ability to experience and feel positively about sexual intimacy, and their ability to feel well about themselves. This capacity cannot be reached until adulthood.

Geeta Nangia

Geeta Nangia

May 19, 2023

WORKS CITED

Abbruzzese, E., Levine, S. B., & Mason, J. W. (2023). The Myth of “Reliable Research” in Pediatric Gender Medicine: A critical evaluation of the Dutch Studies — and research that has followed. *Journal of Sex & Marital Therapy*, 0(0), 1–27. <https://doi.org/10.1080/0092623X.2022.2150346>

Adelson, S. L. (2012). Practice Parameter on Gay, Lesbian, or Bisexual Sexual Orientation, Gender Nonconformity, and Gender Discordance in Children and Adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 51(9), 957–974. <https://doi.org/10.1016/j.jaac.2012.07.004>

Alderson, P. (1992). In the genes or in the stars? Children’s competence to consent. *Journal of Medical Ethics*, 18(3), 119–124. <https://doi.org/10.1136/jme.18.3.119>

American Psychiatric Association (2022). *Diagnostic and Statistical Manual of Mental Disorders: DSM-5-TR*. American Psychiatric Association Publishing.

Appelbaum, P. S., & Grisso, T. (2001). *MacArthur competence assessment tool for clinical research (MacCAT-CR)* (pp. x, 84). Professional Resource Press/Professional Resource Exchange.

Appelbaum, P. S. (2007). Assessment of Patients’ Competence to Consent to Treatment. *New England Journal of Medicine*, 357(18), 1834–1840. <https://doi.org/10.1056/NEJMcp074045>

Berger, K. S. (2016). *Invitation to the Life Span* (3rd ed.). Macmillan Higher Education.

Casey, B. J., Thomas, K. M., Davidson, M. C., Kunz, K., & Franzen, P. L. (2002). Dissociating Striatal and Hippocampal Function Developmentally with a Stimulus–Response Compatibility Task. *Journal of Neuroscience*, 22(19), 8647–8652. <https://doi.org/10.1523/JNEUROSCI.22-19-08647.2002>

Casey, B. J., Getz, S., & Galvan, A. (2008a). The adolescent brain. *Developmental Review*, 28(1), 62–77. <https://doi.org/10.1016/j.dr.2007.08.003>

Casey, B. J., Jones, R. M., & Hare, T. A. (2008b). The adolescent brain. *Annals of the New York Academy of Sciences*, 1124, 111–126.
<https://doi.org/10.1196/annals.1440.010>

Casey, B. J., & Jones, R. M. (2010). Neurobiology of the Adolescent Brain and Behavior: Implications for Substance Use Disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 49(12), 1189–1201. <https://doi.org/10.1016/j.jaac.2010.08.017>

Casey, B. J., Oliveri, M. E., & Insel, T. (2014). A Neurodevelopmental Perspective on the Research Domain Criteria (RDoC) Framework. *Biological Psychiatry*, 76(5), 350–353. <https://doi.org/10.1016/j.biopsych.2014.01.006>

Casey, B. J. (2013, April 27). *BJ Casey presents The Teen Brain: Implications for Legal Responsibility [Conference Presentation]*. The Future of Law and Neuroscience. Chicago, IL, United States.
https://www.lawneuro.org/aba/ChicagoABA_BriefingBook_PostConference.pdf. <https://www.youtube.com/watch?v=kaJM1jeNEmM>

Casey, B. J. (2015). Beyond Simple Models of Self-Control to Circuit-Based Accounts of Adolescent Behavior. *Annual Review of Psychology*, 66(1), 295–319. <https://doi.org/10.1146/annurev-psych-010814-015156>

Center for Substance Abuse Treatment (US). (2014). Understanding the Impact of Trauma. In *Trauma-Informed Care in Behavioral Health Services*. Substance Abuse and Mental Health Services Administration (US).
<https://www.ncbi.nlm.nih.gov/books/NBK207191/>

Chein, J., Albert, D., O'Brien, L., Uckert, K., & Steinberg, L. (2011). Peers increase adolescent risk taking by enhancing activity in the brain's reward circuitry. *Developmental Science*, 14(2), F1–F10. <https://doi.org/10.1111/j.1467-7687.2010.01035.x>

Cohen Cooper, K. (2014). Can I See Some ID? Banning Access to Cosmetic Breast Implant Surgery. *Journal of Law and Health*, 27, 187–214.

Coleman, E., Radix, A. E., Bouman, W. P., Brown, G. R., De Vries, A. L. C., Deutsch, M. B., Ettner, R., Fraser, L., Goodman, M., Green, J., Hancock, A. B., Johnson, T. W., Karasic, D. H., Knudson, G. A., Leibowitz, S. F., Meyer-Bahlburg, H. F. L., Monstrey, S. J., Motmans, J., Nahata, L., ...

Arcelus, J. (2022). Standards of Care for the Health of Transgender and Gender Diverse People, Version 8. *International Journal of Transgender Health*, 23(sup1), S1–S259. <https://doi.org/10.1080/26895269.2022.2100644>

De Vries, A. L. C., Steensma, T. D., Doreleijers, T. A. H., & Cohen-Kettenis, P. T. (2011). Puberty Suppression in Adolescents With Gender Identity Disorder: A Prospective Follow-Up Study. *The Journal of Sexual Medicine*, 8(8), 2276–2283. <https://doi.org/10.1111/j.1743-6109.2010.01943.x>

De Vries, A. L. C., & Cohen-Kettenis, P. T. (2012). Clinical Management of Gender Dysphoria in Children and Adolescents: The Dutch Approach. *Journal of Homosexuality*, 59(3), 301–320. <https://doi.org/10.1080/00918369.2012.653300>

De Vries, A. L. C., McGuire, J. K., Steensma, T. D., Wagenaar, E. C. F., Doreleijers, T. A. H., & Cohen-Kettenis, P. T. (2014). Young Adult Psychological Outcome After Puberty Suppression and Gender Reassignment. *Pediatrics*, 134(4), 696–704. <https://doi.org/10.1542/peds.2013-2958>

Delemarre-van de Waal, H. A., & Cohen-Kettenis, P. T. (2006). Clinical management of gender identity disorder in adolescents: A protocol on psychological and paediatric endocrinology aspectsThis paper was presented at the 4th Ferring Pharmaceuticals International Paediatric Endocrinology Symposium, Paris (2006). Ferring Pharmaceuticals has supported the publication of these proceedings. *European Journal of Endocrinology*, 155(Supplement_1), S131–S137. <https://doi.org/10.1530/eje.1.02231>

Diaz, D. (2015). Minors and Cosmetic Surgery: An Argument for State Intervention. *DePaul Journal of Health Care Law*, 14(2), 235–269. <https://via.library.depaul.edu/jhcl/vol14/iss2/3/> (See, e.g. *id.* at 235, 238, 247, 249, 251).

Dishion, T. J., & Tipsord, J. M. (2011). Peer Contagion in Child and Adolescent Social and Emotional Development. *Annual Review of Psychology*, 62(1), 189–214. <https://doi.org/10.1146/annurev.psych.093008.100412>

Erikson, E. H., & Erikson, J. M. (1998). *The Life Cycle Completed (Extended Version)*. W. W. Norton & Company.

Ernst, M., Pine, D. S., & Hardin, M. (2006). Triadic model of the neurobiology of motivated behavior in adolescence. *Psychological Medicine*, 36(3), 299–312. <https://doi.org/10.1017/S0033291705005891>

Feldman, J., Brown, G. R., Deutsch, M. B., Hembree, W., Meyer, W., Meyer-Bahlburg, H. F. L., Tangpricha, V., T'Sjoen, G., & Safer, J. D. (2016). Priorities for transgender medical and healthcare research. *Current Opinion in Endocrinology, Diabetes and Obesity*, 23(2), 180. <https://doi.org/10.1097/MED.0000000000000231>

Fleischacker, S. (2005). *A Short History of Distributive Justice*. Harvard University Press.

Ghorayshi, A. (2022, June 10). Report Reveals Sharp Rise in Transgender Young People in the U.S. *The New York Times*. <https://www.nytimes.com/2022/06/10/science/transgender-teenagers-national-survey.html>

Giovanardi, G., Vitelli, R., Maggiora Vergano, C., Fortunato, A., Chianura, L., Lingiardi, V., & Speranza, A. M. (2018). Attachment Patterns and Complex Trauma in a Sample of Adults Diagnosed with Gender Dysphoria. *Frontiers in Psychology*, 9. <https://www.frontiersin.org/articles/10.3389/fpsyg.2018.00060>

Gogtay, N., Giedd, J. N., Lusk, L., Hayashi, K. M., Greenstein, D., Vaituzis, A. C., Nugent, T. F., Herman, D. H., Clasen, L. S., Toga, A. W., Rapoport, J. L., & Thompson, P. M. (2004). Dynamic mapping of human cortical development during childhood through early adulthood. *Proceedings of the National Academy of Sciences*, 101(21), 8174–8179. <https://doi.org/10.1073/pnas.0402680101>

Grisso, T., Appelbaum, P. S., & Hill-Fotouhi, C. (1997). The MacCAT-T: A clinical tool to assess patients' capacities to make treatment decisions. *Psychiatric Services*, 48(11), 1415–1419. <https://doi.org/10.1176/ps.48.11.1415>

Grisso, T., & Appelbaum, P. S. (1998). *Assessing Competence to Consent to Treatment: A Guide for Physicians and Other Health Professionals*. Oxford University Press.

Grootens-Wiegers, P., Hein, I. M., van den Broek, J. M., & de Vries, M. C. (2017). Medical decision-making in children and adolescents: Developmental and neuroscientific aspects. *BMC Pediatrics*, 17(1), 120. <https://doi.org/10.1186/s12887-017-0869-x>

Guyer, P. (2003). Kant on the Theory and Practice of Autonomy. *Social Philosophy and Policy*, 20(2), 70–98. <https://doi.org/10.1017/S026505250320203X>

Hare, T. A., Tottenham, N., Galvan, A., Voss, H. U., Glover, G. H., & Casey, B. J. (2008). Biological Substrates of Emotional Reactivity and Regulation in Adolescence During an Emotional Go-Nogo Task. *Biological Psychiatry*, 63(10), 927–934. <https://doi.org/10.1016/j.biopsych.2008.03.015>

Heim, C., Newport, D. J., Mletzko, T., Miller, A. H., & Nemeroff, C. B. (2008). The link between childhood trauma and depression: Insights from HPA axis studies in humans. *Psychoneuroendocrinology*, 33(6), 693–710. <https://doi.org/10.1016/j.psyneuen.2008.03.008>

Hein, I. M., Troost, P. W., Lindeboom, R., Benninga, M. A., Zwaan, C. M., van Goudoever, J. B., & Lindauer, R. J. L. (2014). Accuracy of the MacArthur Competence Assessment Tool for Clinical Research (MacCAT-CR) for Measuring Children's Competence to Consent to Clinical Research. *JAMA Pediatrics*, 168(12), 1147–1153. <https://doi.org/10.1001/jamapediatrics.2014.1694>

Hein, I. M., De Vries, M. C., Troost, P. W., Meynen, G., Van Goudoever, J. B., & Lindauer, R. J. L. (2015). Informed consent instead of assent is appropriate in children from the age of twelve: Policy implications of new findings on children's competence to consent to clinical research. *BMC Medical Ethics*, 16(1), 76. <https://doi.org/10.1186/s12910-015-0067-z>

Herman, J. L., Flores, A. R., & O'Neill, K. K. (2022). How Many Adults and Youth Identify as Transgender in the United States? *UCLA, The Williams Institute*. <https://williamsinstitute.law.ucla.edu/publications/trans-adults-united-states/>. <https://williamsinstitute.law.ucla.edu/wp-content/uploads/Trans-Pop-Update-Jun-2022.pdf>

Hillier, L. M., & Morrongiello, B. A. (1998). Age and Gender Differences in School-Age Children's Appraisals of Injury Risk. *Journal of Pediatric Psychology*, 23(4), 229–238. <https://doi.org/10.1093/jpepsy/23.4.229>

Huang, Y., Hu, P., & Li, X. (2017). Undervaluing delayed rewards explains adolescents' impulsivity in inter-temporal choice: An ERP study. *Scientific Reports*, 7(1), Article 1. <https://doi.org/10.1038/srep42631>

Jaffe, A. E., DiLillo, D., Gratz, K. L., & Messman-Moore, T. L. (2019). Risk for Revictimization Following Interpersonal and Noninterpersonal Trauma: Clarifying the Role of Posttraumatic Stress Symptoms and Trauma-Related Cognitions. *Journal of Traumatic Stress*, 32(1), 42–55. <https://doi.org/10.1002/jts.22372>

Johns, M. M., Lowry, R., Andrzejewski, J., Barrios, L. C., Demissie, Z., McManus, T., Rasberry, C. N., Robin, L., & Underwood, J. M. (2019). Transgender Identity and Experiences of Violence Victimization, Substance Use, Suicide Risk, and Sexual Risk Behaviors Among High School Students — 19 States and Large Urban School Districts, 2017. *MMWR. Morbidity and Mortality Weekly Report*, 68. <https://doi.org/10.15585/mmwr.mm6803a3>

Johnson, S. B., Blum, R. W., & Giedd, J. N. (2009). Adolescent Maturity and the Brain: The Promise and Pitfalls of Neuroscience Research in Adolescent Health Policy. *Journal of Adolescent Health*, 45(3), 216–221. <https://doi.org/10.1016/j.jadohealth.2009.05.016>

Jones, R. M., Somerville, L., Li, J., Ruberry, E. J., Powers, A., Mehta, N., Dyke, J., & Casey, B. J. (2014). Adolescent-specific patterns of behavior and neural activity during social reinforcement learning. *Cognitive, Affective, & Behavioral Neuroscience*. <https://doi.org/10.3758/s13415-014-0257-z>

Lebrun-Harris, L. A., Ghandour, R. M., Kogan, M. D., & Warren, M. D. (2022). Five-Year Trends in US Children's Health and Well-being, 2016–2020. *JAMA Pediatrics*, 176(7), e220056. <https://doi.org/10.1001/jamapediatrics.2022.0056>

Littman, L. (2018). Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. *PLOS ONE*, 13(8), e0202330. <https://doi.org/10.1371/journal.pone.0202330>

Mann, L., Harmoni, R., & Power, C. (1989). Adolescent decision-making: The development of competence. *Journal of Adolescence*, 12(3), 265–278. [https://doi.org/10.1016/0140-1971\(89\)90077-8](https://doi.org/10.1016/0140-1971(89)90077-8)

Markovits, H., Fleury, M.-L., Quinn, S., & Venet, M. (1998). The Development of Conditional Reasoning and the Structure of Semantic Memory. *Child Development*, 69(3), 742–755. <https://doi.org/10.1111/j.1467-8624.1998.tb06240.x>

Markovits, H. (2013). The development of abstract conditional reasoning. In P. Gauffroy & C. Barrouillet (Eds.), *The Development of Thinking and Reasoning* (1st ed.). Psychology Press. <https://doi.org/10.4324/9780203068748>

McClure, S. M., Laibson, D. I., Loewenstein, G., & Cohen, J. D. (2004). Separate neural systems value immediate and delayed monetary rewards. *Science* (New York, N.Y.), 306(5695), 503–507. <https://doi.org/10.1126/science.1100907>

Metcalfe, J., & Mischel, W. (1999). A hot/cool-system analysis of delay of gratification: Dynamics of willpower. *Psychological Review*, 106, 3–19. <https://doi.org/10.1037/0033-295X.106.1.3>

Miller, V. A., Drotar, D., & Kodish, E. (2004). Children's Competence for Assent and Consent: A Review of Empirical Findings. *Ethics & Behavior*, 14(3), 255–295. https://doi.org/10.1207/s15327019eb1403_3

Mills, K. L., Goddings, A.-L., Clasen, L. S., Giedd, J. N., & Blakemore, S.-J. (2014). The Developmental Mismatch in Structural Brain Maturation during Adolescence. *Developmental Neuroscience*, 36(3–4), 147–160. <https://doi.org/10.1159/000362328>

Mueller, S. C., Maheu, F. S., Dozier, M., Peloso, E., Mandell, D., Leibenluft, E., Pine, D. S., & Ernst, M. (2010). Early-life stress is associated with impairment in cognitive control in adolescence: An fMRI study. *Neuropsychologia*, 48(10), 3037–3044. <https://doi.org/10.1016/j.neuropsychologia.2010.06.013>

Palmer, B. W., & Harmell, A. L. (2016). Assessment of Healthcare Decision-making Capacity. *Archives of Clinical Neuropsychology*, 31(6), 530–540. <https://doi.org/10.1093/arclin/acw051>

Pike, M. M., Barnes, M. A., & Barron, R. W. (2010). The role of illustrations in children's inferential comprehension. *Journal of Experimental Child Psychology*, 105(3), 243–255. <https://doi.org/10.1016/j.jecp.2009.10.006>

Riggio, R. E., & Riggio, C. R. (2022). Social contagion. In *Reference Module in Neuroscience and Biobehavioral Psychology*. Elsevier. <https://doi.org/10.1016/B978-0-323-91497-0.00192-2>

Rueda, M. R., Fan, J., McCandliss, B. D., Halparin, J. D., Gruber, D. B., Lercari, L. P., & Posner, M. I. (2004). Development of attentional networks in childhood. *Neuropsychologia*, 42(8), 1029–1040. <https://doi.org/10.1016/j.neuropsychologia.2003.12.012>

Schnarrs, P. W., Stone, A. L., Salcido, R., Baldwin, A., Georgiou, C., & Nemeroff, C. B. (2019). Differences in adverse childhood experiences (ACEs) and quality of physical and mental health between transgender and cisgender sexual minorities. *Journal of Psychiatric Research*, 119, 1–6. <https://doi.org/10.1016/j.jpsychires.2019.09.001>

Shaffer D. R., & Kipp, K. (2007). Developmental psychology: Childhood and adolescence (7th ed). Wadsworth/Thomson.

Steinberg, L. (2004). Risk Taking in Adolescence: What Changes, and Why? *Annals of the New York Academy of Sciences*, 1021(1), 51–58. <https://doi.org/10.1196/annals.1308.005>

Steinberg, L., Albert, D., Cauffman, E., Banich, M., Graham, S., & Woolard, J. (2008). Age differences in sensation seeking and impulsivity as indexed by behavior and self-report: Evidence for a dual systems model. *Developmental Psychology*, 44, 1764–1778. <https://doi.org/10.1037/a0012955>

Steinberg, L., Graham, S., O'Brien, L., Woolard, J., Cauffman, E., & Banich, M. (2009). Age Differences in Future Orientation and Delay Discounting. *Child Development*, 80(1), 28–44. <https://doi.org/10.1111/j.1467-8624.2008.01244.x>

Steinberg, L. (2013). Does Recent Research on Adolescent Brain Development Inform the Mature Minor Doctrine? *The Journal of Medicine and Philosophy: A Forum for Bioethics and Philosophy of Medicine*, 38(3), 256–267. <https://doi.org/10.1093/jmp/jht017>

Thaler, N. S., Goldstein, G., Pettegrew, J. W., Luther, J. F., Reynolds, C. R., & Allen, D. N. (2013). Developmental Aspects of Working and Associative Memory. *Archives of Clinical Neuropsychology*, 28(4), 348–355. <https://doi.org/10.1093/arclin/acs114>

Trauma Recovery Institute. *Trauma Recovery*. The Trauma Recovery Institute. Retrieved May 18, 2023, from <https://www.psychosocialsomatic.com/trauma-recovery/>

Van Leijenhorst, L., Zanolie, K., Van Meel, C. S., Westenberg, P. M., Rombouts, S. A. R. B., & Crone, E. A. (2010). What Motivates the Adolescent? Brain Regions Mediating Reward Sensitivity across Adolescence. *Cerebral Cortex*, 20(1), 61–69. <https://doi.org/10.1093/cercor/bhp078>

Varkey, B. (2020). Principles of Clinical Ethics and Their Application to Practice. *Medical Principles and Practice*, 30(1), 17–28. <https://doi.org/10.1159/000509119>

Wortham, J. (2018, November 16). On Instagram, Seeing Between the (Gender) Lines. *The New York Times*. <https://www.nytimes.com/interactive/2018/11/16/magazine/tech-design-instagram-gender.html>, <https://www.nytimes.com/interactive/2018/11/16/magazine/tech-design-instagram-gender.html>

Zuckerman, D. (2005). Teenagers and Cosmetic Surgery. *AMA Journal of Ethics*, 7(3), 253–256. <https://doi.org/10.1001/virtualmentor.2005.7.3.0503>

APPENDIX A. TRIADIC MODEL OF NEUROBIOLOGY

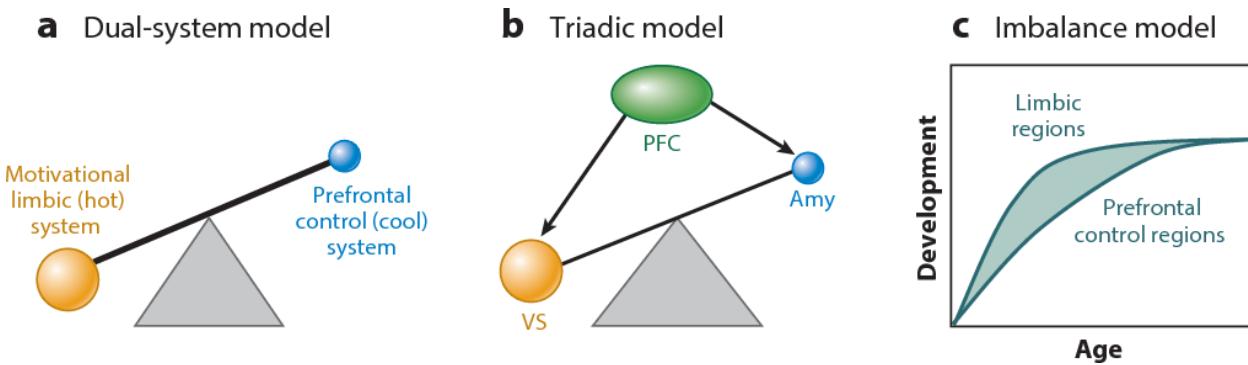


Figure 2

Published in Annual Review of Psychology 2015

Beyond simple models of self-control to circuit-based accounts of adolescent behavior.

[B. Casey](#)

APPENDIX B. ADOLESCENT FMRI STUDIES WHEN PRESENTED WITH REWARD

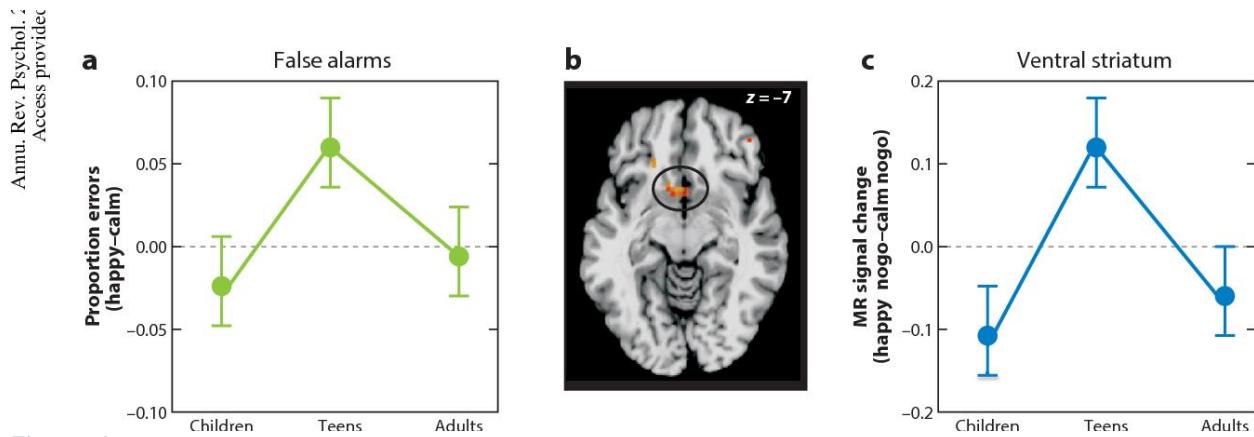


Figure 4

Published in Annual Review of Psychology 2015

Beyond simple models of self-control to circuit-based accounts of adolescent behavior.

[B. Casey](#)

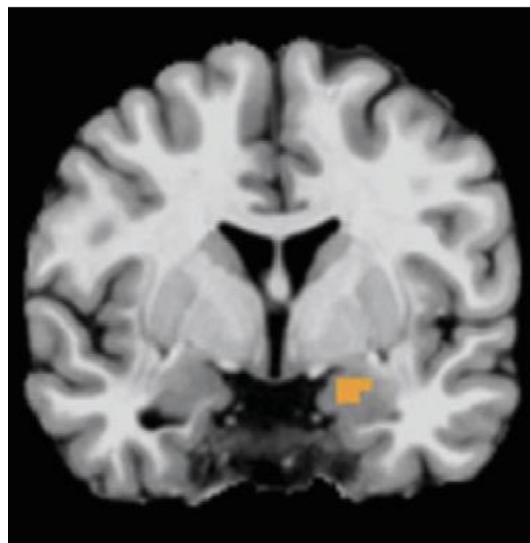


Figure 5

Published in Annual Review of Psychology 2015

Beyond simple models of self-control to circuit-based accounts of adolescent behavior.

APPENDIX C. CROSS TALK BETWEEN THE PFC AND VENTRAL STRIATUM

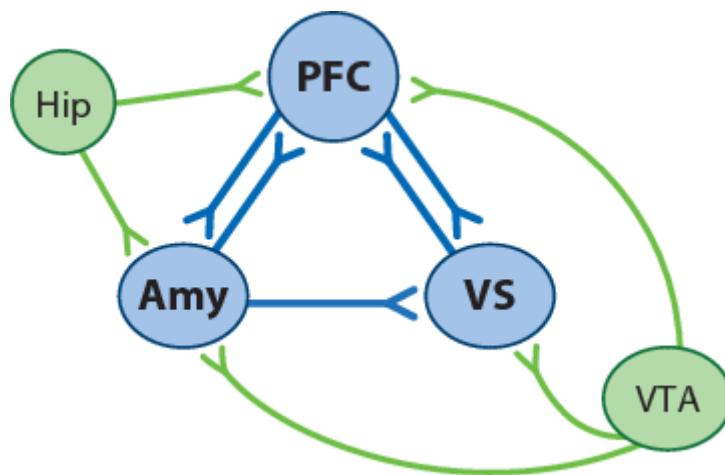


FIGURE 3

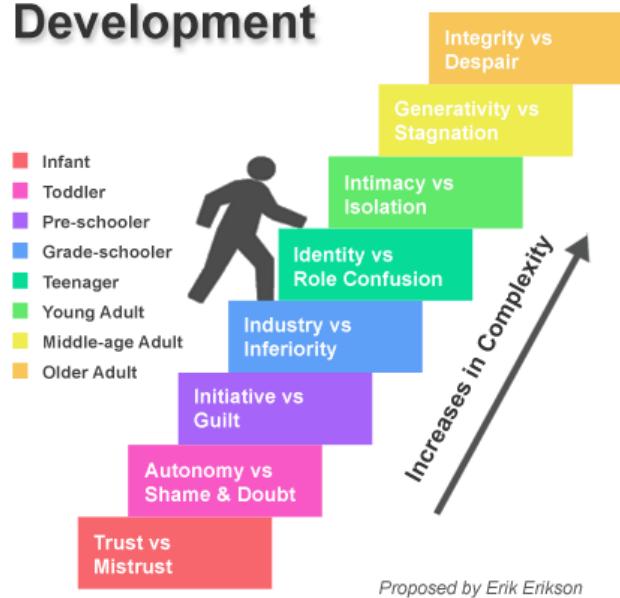
Published in Annual Review of Psychology 2015

Beyond simple models of self-control to circuit-based accounts of adolescent behavior.

[B. Casey](#)

APPENDIX D. ERIKSON'S PSYCHOSOCIAL DEVELOPMENT MODEL

Stages of Psychosocial Development



Geeta Nangia, M.D.

Board Certified in Adult Psychiatry and Child & Adolescent Psychiatry

Phone (864) 318-9930 • drnangia@jothgreenville.com

EDUCATION

Boston University School of Medicine
Doctor of Medicine

Boston, MA
May 2002

Boston University
Bachelor of Arts Biochemistry, Molecular Biology

Boston, MA
May 1998

INTERNSHIP AND RESIDENCY

Medical University of South Carolina
Child and Adolescent Psychiatry Fellow

Charleston, SC
June 2007

Medical University of South Carolina
General Psychiatry Resident

Charleston, SC
June 2006

EXPERIENCE

Known and Loved
CEO

Greenville, SC
2021-present

Educating, equipping, and supporting the growth of healthy families in our region. Providing mental health education and support to parents, with a special focus on foster and adoptive families. Helping parents to establish secure and healthy attachments with children, thereby improving their long term mental health outcomes. Laying the groundwork for schools, community service organizations, first responders, medical providers, and families to become educated and informed about Trust Based Relational Intervention (TBRI) and the importance of a trauma informed approach in working with children and youth.

Journey of the Heart, LLC
Child and Adolescent Psychiatrist

Piedmont, SC
2022-present

Providing behavioral health care for children and families, specializing in complex cases and trauma.

Parkside Pediatrics Behavioral Health
Child & Adolescent Psychiatrist

Greenville, SC
2019-2022

Opened and developed Parkside Behavioral Health at Parkside Pediatrics for Upstate SC children and families. Consulted on child and adolescent mental health cases for a large pediatric group with multiple sites. Coordinated care with local schools in order to provide accommodations and support for children

and youth. Provided parent and provider education classes. Specialized in complex cases and trauma.

Carolina Family Services **Greenville, SC**
Staff Psychiatrist **2016-2018**

Provided behavioral health care for children and families.

Edward Via College of Osteopathic Medicine **Spartanburg, SC**
Community Clinical Faculty and Lecturer **2015-2020**

Taught medical students about the principles of childhood development and clinical psychiatry.

Carolina Center for Behavioral Health **Greer, SC**
Staff Psychiatrist **2015-2016**

Provided psychiatric services in an inpatient unit for children and adults of all ages who were in need of acute crisis stabilization and mental health services. Provided medication management for intensive outpatient programs and addiction programs.

The Well Planted Child, LLC **Bellefonte, PA**
Child and Adolescent Psychiatrist **2014- 2015**

Provided school based psychiatric consultation services for children with behavioral and/or academic difficulties. Assisted teachers in developing effective classroom management strategies and in creating accommodations for children with special needs. Provided care for the BLAST Intermediate Unit which serves multiple school districts in the region.

Centre County Christian Academy **Bellefonte, PA**
Kindergarten Teacher **2014-2015**

Primary teacher for morning academics at a private school for an academic year. Assessed classroom modifications and strategies typically recommended by clinical mental health professionals to assess their efficacy. Provided consulting services for children with special needs or behavioral issues.

Diversified Treatment Alternatives **Lewisburg, PA**
Child and Adolescent Psychiatrist **2012- 2015**

Provided evaluation and treatment for children in two residential care facilities. Provided care for a high risk youth population with a special focus on sexual abuse, sexual perpetration, trauma, and addiction. Supervised treatment teams who were providing trauma focused treatment for children. Provided psychiatric care for children and adolescents in a partial hospitalization program.

Sunpointe Health **State College, PA**
Child and Adolescent Outpatient Psychiatrist **2011-2012**
Adult Psychiatry Inpatient Attending Psychiatrist

Provided inpatient adult psychiatric evaluation and treatment in an acute care setting at Mount Nittany Medical Center. Taught medical students during their psychiatry rotation. Provided outpatient psychiatric care for children and adolescents.

Palmetto Christian Psychiatry	Charleston, SC
Private Practice Psychiatrist	2010-2011
Provided psychiatric evaluation and treatment for individuals of all ages.	
Provided individual and family psychotherapy.	
Susquehanna Health Medical Group	Williamsport, PA
Child and Adolescent Psychiatrist	2007-2010
Adult Psychiatry Inpatient Attending Psychiatrist	
Spearheaded The Department of Child Psychiatry at a local community hospital with a mission to serve children who otherwise did not have access to mental health care. Performed evaluations and treatment for children and adults with a broad spectrum of mental health and developmental disorders. Actively conducted family therapy, psychodynamic therapy, cognitive behavioral therapy, play therapy, as well as group therapy. Provided medication management. Worked with outlying community agencies in all arenas, consulting with and for schools, social services, court systems, pediatricians and primary care physicians, wrap around services, and partial hospitalization programs to coordinate care for children. Taught in the family medicine residency program weekly. Supervised staff therapist and psychiatric nurse. Provided courtroom testimony in custody and abuse cases. Performed on call duties on the adult inpatient unit.	
Carolina Center for Behavioral Health	Greer, SC
Staff Psychiatrist	2006-2007
Served in a weekend moonlighting position servicing an adult inpatient population while in fellowship training. Managed crisis calls, multiple levels of acuity, and geriatric patients on weekends during my fellowship.	

HONORS

Susquehanna Physician Appreciation Award, 2008
Family Medicine Residency Teaching Certificate 2008
Circle of Excellence in Teaching 2003
Ruth Hunter Johnson Prize in Psychiatry 2002

LICENSURES

Pennsylvania Medical License MD 431126 inactive
South Carolina Medical License MD 26215 active

CERTIFICATIONS

American Board of Psychiatry and Neurology, General Psychiatry
American Board of Psychiatry and Neurology, Child and Adolescent Psychiatry